
HARMONY
and its
Contrapuntal
Treatment

ROBERT GOMER JONES

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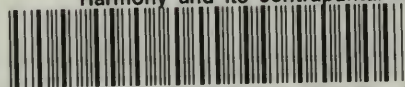
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HARMONY
AND ITS
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CONTRAPUNTAL TREATMENT

By

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PREFACE

THE aim of this book is to treat the subject of harmony from a melodic, or contrapuntal, standpoint. Inasmuch as the more complex chord formations are the result of contrapuntal treatment, the author feels that some knowledge of counterpoint is necessary before the student can thoroughly understand the science of harmony. Furthermore, the harmonization of a melody in four parts involves an aural perception and a knowledge of musical effect far beyond that of the average beginner. The author assumes that the student has thoroughly mastered the rudiments of music, i.e., music notation, scales and the intervals as, for instance, those contained in *Theory of Music*.

In this work the first twelve chapters are devoted to the mastery of elementary harmony and simple chord progressions, providing a foundation for the study of such decorative devices as bye-tones, passing-tones, auxiliary-tones, suspensions and appoggiaturas which are necessary elements in the study of melodic writing.

With these fundamental principles mastered, melodic movement and harmonic progression are studied concurrently. Melody writing is followed by the study of counterpoint in first, second, third, fourth and fifth species in two, three and four parts, arranged in such a manner that the student may develop an oral perception, i.e., the ability to hear what he sees on the printed page.

The chromatically altered and more complex chord formations are studied from their source, by substituting the unessential tone for the harmony tone it was originally intended to decorate. In this way the students are able to approach intelligently and resolve the various dissonant chord formations without depending entirely upon memorizing the numerous rules.

Modulation has been treated with more detail than usual; the various examples are carefully analyzed and figured so that the student may clearly understand the intricate key connections.

Because of the comprehensive treatment of the exercises and the numerous illustrations that would be impractical as part of the text, a workbook has been prepared to accompany this book. It is arranged in such a manner that assignments may be corrected conveniently and preserved for future use. It will also save the teacher a considerable amount of time in the preparation of assign-

ments and will facilitate matters when grading students work and making semester reports.

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HARMONY
AND ITS
CONTRAPUNTAL TREATMENT

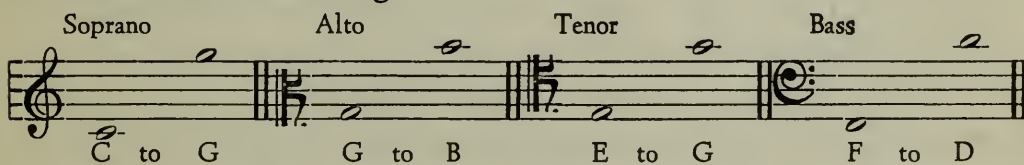


ELEMENTARY HARMONY.—*Preliminary Definitions*

1. HARMONY may be defined as sounds in combination and succession. The term is commonly used to mean: (a) The simultaneous sounding of a combination of musical tones of different pitch, usually spoken of as chords. (b) The classification of such combinations or chords. (c) The relation of such chords to one another, particularly as to the various ways in which they are used in succession to produce an agreeable whole.
2. A CHORD is a combination of two or more musical sounds of different pitch, sung or played simultaneously.
3. A PART is that particular succession of single sounds which is sung or played by one of the voices or instruments.
4. MELODIC PROGRESSION is the succession of melodic tones and their intervals, sung or played in each particular part or voice.
5. HARMONIC PROGRESSION is the motion of all parts in chord formation.
6. Harmony must be regarded in a twofold aspect:
 - (a) as the art of melody or part-writing.
 - (b) as the art of chord-building.

Both these arts are governed by certain rules or laws which will be explained in the ensuing chapters.

7. VOICE PARTS.—When we speak of voice parts, we mean: soprano, alto, tenor and bass. The compass for each voice should not exceed the following:



8. The FIGURED BASS is a system of figures, accidentals and other signs placed under a bass part to denote the various chords; it is sometimes called THOROUGH BASS, or BASSO CONTINUO.

9. POSITION OF VOICE PARTS IN A SCORE.—The soprano should always have the highest notes in the vocal score; the alto part should be kept below the soprano, the tenor part should be lower than the alto, and the bass should always be lower than the tenor. The bass and soprano are called the EXTREME or OUTSIDE parts; the alto and tenor, the INNER or MIDDLE parts.

10. BASS-NOTE. The lowest note of a chord is always called the BASS-NOTE, no matter how high or low in the musical scale that chord is written.

THE ELEMENTS OF PART-WRITING

1. It will be observed that part-writing and chord-making are inseparable. No combination of three or more parts can be sung or played together without producing a succession of chords, and no two chords can be played in succession without causing three of four different motions of parts.

2. MOTION OF PARTS.—The various motions of parts are as follows:

- (a) SIMILAR MOTION: parts moving in the same direction.
- (b) CONTRARY MOTION: parts moving in the opposite direction.
- (c) OBLIQUE MOTION: one part remaining stationary while the others move, e.g.:

Ex. I

Oblique Contrary Similar

Example I shows three measures of music. The first measure is labeled 'Oblique' and shows a soprano line moving up while the alto line remains stationary. The second measure is labeled 'Contrary' and shows the soprano line moving up while the alto line moves down. The third measure is labeled 'Similar' and shows both the soprano and alto lines moving up.

Ex. II

Oblique motion between soprano and alto.
Similar motion between tenor and bass.
Contrary motion between soprano and bass.

Example II shows two measures of music. The first measure is labeled 'Oblique motion between soprano and alto' and shows the soprano line moving up while the alto line remains stationary. The second measure is labeled 'Similar motion between tenor and bass' and shows both the tenor and bass lines moving up. The third measure is labeled 'Contrary motion between soprano and bass' and shows the soprano line moving up while the bass line moves down.

3. DIFFERENT MOTION OF PARTS.—Similar motion is the least interesting of the three methods of moving parts; it should be combined with either oblique or contrary motion, or both. A judicious use of all three motions should be aimed at in doing the exercises.

4. CONSECUTIVE AND REPEATED OCTAVES.—An undue prominence is given to the melody of any part when another part moves in octaves or unison with it. This unsatisfactory result is due to the fact that the harmony for the moment loses one of its distinct and different parts. To avoid this defect, the following rule must be observed: "No two parts may move in octaves, or in unison with each other." See Ex. III, (a) and (b).

Ex. III

(a)

bad bad bad bad

(b)

good good

Consecutive octaves and unisons are often used when a composer desires to give prominence to an entire phrase. Such prominence will be unnecessary in an exercise. See Ex. IV.

Ex. IV

R. G. J.

Sing me a song of the frozen north,

5. CONSECUTIVE FIFTHS.—A greater prominence is given to the melody of any one part when another part moves in 5ths with it, in similar or contrary motion. When consecutive 5ths are used, the harmony acquires a confused sense of tonality—as if two parts were moving in different keys. Although modern composers frequently use this effect, the use of consecutive 5ths should be strictly forbidden during the early stages of the student's career. Consecutive 5ths in contrary motion are less objectionable; however, they are permissible only when they occur between an inside and outside part, provided the progression is between primary triads. To avoid unpleasant ambiguity in part-writing, the following rule must be observed: "No two parts may move in per-

fect 5ths with each other, in similar or contrary motion." See Ex. V.

Ex. V

bad bad good

undesirable tolerable

6. Two 5ths in succession are allowable if one is diminished, provided the perfect 5th comes first:

Ex. VI

good bad

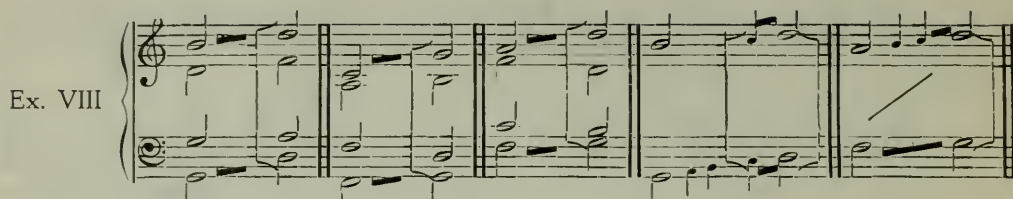
7. A diminished 5th followed by a perfect 5th is forbidden between the bass and any other part, but this progression is permitted if the 5ths occur between the upper voices and one part moves by step. See Ex. VII.

Ex. VII

bad good good

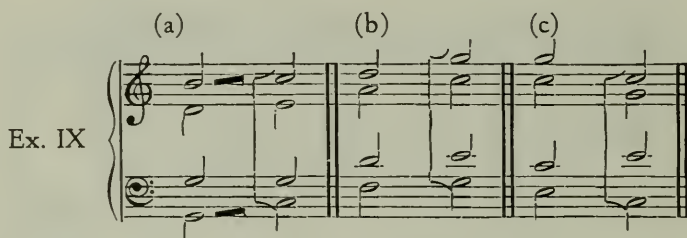
8. HIDDEN OCTAVES AND FIFTHS.—When two parts move in the same direction to octaves or fifths, they produce an effect similar to consecutives. Such a progression is called "HIDDEN" OCTAVES OR FIFTHS, because what would be a case of consecutives, if both

parts moved by step, is hidden by one or both parts moving by leap:

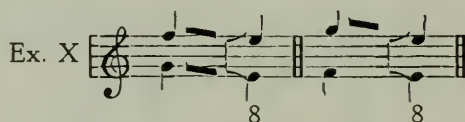


To avoid these forbidden progressions the following rule should be observed: "The extreme parts must not approach an octave or fifth by similar motion," except under the following conditions:

HIDDEN OCTAVES are permissible: (a) between the primary chords (I-IV and I-V) when the upper voice moves by step and the lower voice by leap; (b) when the second chord is a second inversion, the bass-note being the tonic or dominant; (c) when the same chord is repeated in a different position:



Hidden octaves are allowable between any other parts; but a seventh or ninth moving to an octave in similar motion is strictly forbidden between any two parts:



HIDDEN FIFTHS are permissible between the extreme parts under the following conditions:

- (a) When between the primary chords in root position and first inversion, with the upper voice moving by step.
- (b) When the same chord is repeated in a different position.

Ex. XI

(a) (a) (b) (b)

Hidden fifths are forbidden *only* between the extreme parts; they are not objectionable between any other parts.

9. Two parts moving in the same direction to a unison are called **SIMILAR MOTION TO UNISON**. This progression, as well as its use in leaving a unison, should be avoided by the beginner:

Ex. XII

The following rule should be observed by beginners: "Avoid approaching or leaving a unison in similar motion."

CHORD BUILDING.—*The Triad, etc.*

1. When two notes are sounded together, they form what is called an INTERVAL OF HARMONY, which may be either consonant or dissonant. (The consonant intervals are the octave, perfect fourths and fifths, major and minor thirds and sixths. All others are dissonant.)
2. The simplest form of a complete consonant chord consists of no more, or less, than three sounds placed one above another, each note being a major or minor third above the next lower note. No more than three different degrees of a scale can be sounded together in this manner without producing a dissonant combination.
3. The chords containing only three notes are called TRIADS. The sounds are always put together with special reference to the bass-note, which is always regarded as the starting point or note of origin—the foundation upon which the chord is built. In a consonant chord the upper notes are consonant to the bass and to one another, e.g.:

Ex. I

(a) Concord, (b) Discord, (c) Concord

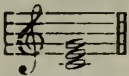
NOTE: A consonant combination is one which is satisfactory in itself, possessing a certain feeling of repose.

A dissonant combination demands a progression to some other chord in order to complete its effect.

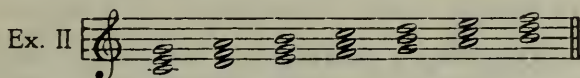
The term discord may apply to the whole combination, or to the special note in that combination which needs to move in a particular direction, e.g., the C# in Ex. 1 (b).

4. The bass-note of a triad, which is the ground note (or fundamental note), is always called the Root. The term is used in a

strictly grammatical sense, notes being added to a root to form a chord much as syllables are added to a root to form a word.

5. To build a simple consonant chord, we may take any tone, as, for example, C, and add two notes above it at the consonant intervals of a 3rd and a 5th, e.g.:  We now have a major triad. In the key of C major this is the tonic triad since its root is the tonic of that key.

6. By the same method triads may be built on other tones of a key. In C major these triads are as follows:



7. It will be observed, after keyboard experiment, that although each triad contains a 3rd and 5th, the aural effect is not the same in each case. The triads built on I, IV and V contain a major 3rd and perfect 5th (reckoned from the root), and the triads built on II, III and VI contain a minor 3rd and perfect 5th. These are called major and minor triads, respectively, the third always being the identifying note.

8. The triad on the seventh degree is a dissonant triad because the 5th is diminished. This triad is not generally used in root position. (A chord is said to be in root position when the root [or fundamental note] is in the bass.)

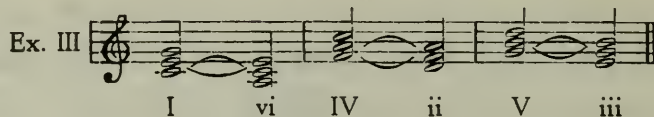
9. The chords built on the first six degrees of the scale are called COMMON CHORDS; they are common to two or more keys. The triad on the seventh degree is common only to the major key in which it is found, and to its relative minor. This triad will be fully explained in the ensuing chapters.

10. The term COMMON CHORD is applied only to triads having a perfect 5th above the bass-note. No common chord can have an augmented or diminished 5th.

11. The triads on I, IV and V are called PRIMARY TRIADS, and those on II, III and VI SECONDARY TRIADS.

12. The secondary triads are closely related to the primary triads,

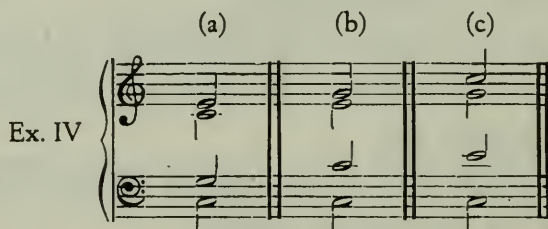
the two lower notes of the primary being identical with the upper notes of the relative minor or secondary triads, e.g.:



13. Where triads (three-tone chords) are used in four-part-writing, one of the notes must be doubled, i.e., heard in more than one voice either in unison or at the octave.

14. The root, being the fundamental note, is the best note to double in a major or minor triad. Sometimes, during the course of an exercise, it is impossible to double the bass-note (or root) of a triad because of consecutive octaves and 5ths. (See Chap. XV.) In such cases the primary note in the triad is the best note to double, i.e., in major triads the 5th and in minor triads the 3rd. It will be observed by referring to Ex. III that the 3rd of the minor triads ii, iii and vi, and the 5th of the major triads I and IV are primary degrees of the scale. The 3rd of the dominant triad is the leading note of the key and, for the present, should not be doubled. Frequently it becomes necessary to omit the 5th; in such cases the root will appear three times and the 3rd once. It is best not to omit the 3rd of a chord, because without it the tonality, or that element of key feeling (major or minor), is vague.

15. When writing common chords for four voices, any one of the three notes may be placed in the soprano part; hence three different positions of the chord are available: (a) with the 3rd in the soprano; (b) with the 5th in the soprano, and (c) with the root in the soprano:



16. When the upper voices are written within the limits of an

octave, the harmony is said to be in CLOSE POSITION, irrespective of the position of the bass—whether it be near or far removed. When the upper voices are distributed so that they exceed the compass of an octave, the harmony is said to be in OPEN POSITION.

Close position Open position

Ex. V

The example shows two musical staves. The left staff, labeled 'Close position', shows a chord with three notes in the treble clef (F4, A4, C5) and two notes in the bass clef (F3, A2). The right staff, labeled 'Open position', shows a chord with three notes in the treble clef (F4, A4, C5) and two notes in the bass clef (F3, A2), but the upper notes are spread out more than in the close position.

17. The position of the chords will generally depend upon the voice leading: the notes of the chord should in general be as nearly equidistant¹ as possible.

¹ It may be well for the student to know that the distance between two notes may be measured by the number of vibrations per second required to produce a sound; i.e., if we take the note C with 128 vibrations for a starting point, the octave above will vibrate at a frequency of 256, the G a fifth above the octave 384, and so on. It will be seen, from a study of the following example, that these sounds are equidistant: 128 vibrations from note to note:

Ex. VI

The example shows a musical staff with notes and their corresponding frequencies in vibrations per second. The notes are C (128), G (256), C (384), F (512), C (640), and G (768). The frequencies are labeled above the notes: 128, 256, 384, 512, 640, and 768, and so on.

For further information on this subject, see the article on Acoustics in *Grove's Dictionary of Music*.

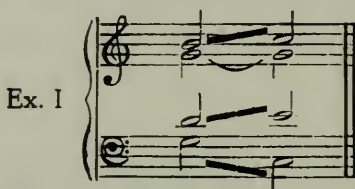
CADENCES

1. Certain important successions of chords, known as CADENCES, occur at the ends of musical phrases where they produce a feeling of either suspense or finality. The cadences most commonly used in the music of the last three hundred years are:

- (a) The PERFECT CADENCE, consisting of some form of the dominant followed by the tonic. This cadence occurs most frequently at the ends of musical periods.
- (b) The PLAGAL CADENCE, consisting of some form of the subdominant followed by the tonic.
- (c) The IMPERFECT OR HALF CADENCE, the progression from the tonic to the dominant.
- (d) The DECEPTIVE OR INTERRUPTED CADENCE, generally the progression from the dominant to the submediant.

2. The usual treatment of these cadences is as follows:

THE PERFECT CADENCE.—In a PERFECT CADENCE, two parts have a fixed progression: The bass moves from the dominant to the tonic, and the 3rd of the dominant chord (being the leading-note of the key) must rise to the tonic. This cadence affords a good example of how to write properly two common chords in succession:



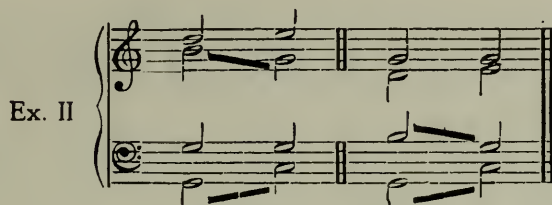
When writing a perfect cadence the following rules should be observed:

- (a) The leading note must rise.

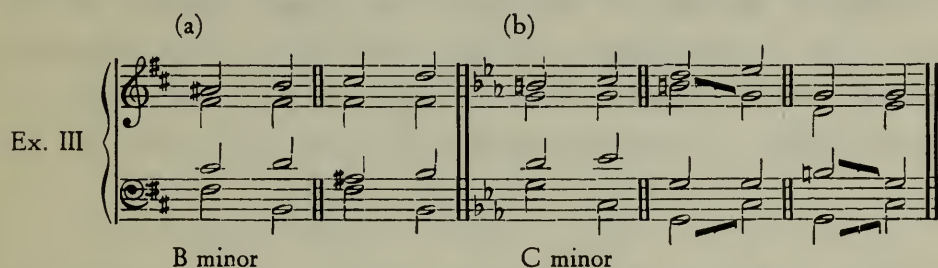
(b) The octave to the root remains in the same voice part.

(c) The fifth may rise or fall.

The above rules are always observed when the bass (V) falls to the tonic (I). The conclusive effect of a cadence is not marred when the bass *ascends* to the tonic; in this case the leading note may fall to the 5th of the tonic chord with good effect.

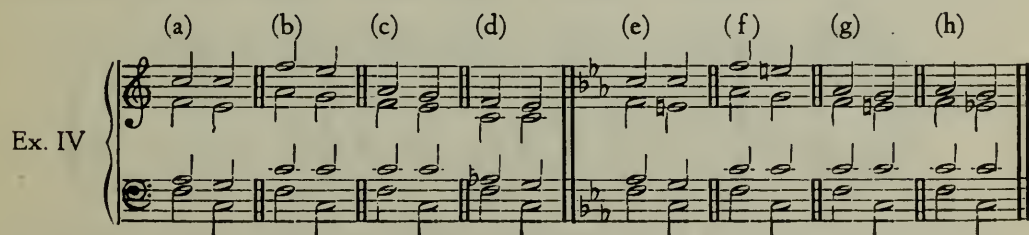


3. Whenever the leading tone is used in a dominant chord in minor keys, it must be raised a half step by the proper accidental:



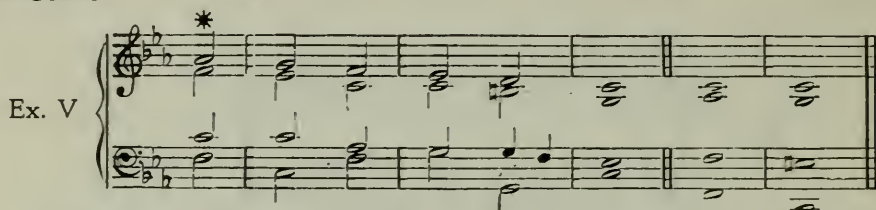
The cadences in Exs. I and II may be changed to C minor by adding the key-signature (three flats) and the natural sign (♮) before the leading note (3rd of the dominant chord). (See Ex. III [b].)

4. THE PLAGAL CADENCE.—The progression IV to I (subdominant to tonic), called the PLAGAL CADENCE, is often used after the perfect cadence in order to bring the composition to a more conclusive close. This cadence is familiar in church music, generally being used as an additional close after a hymn or anthem, e.g.:

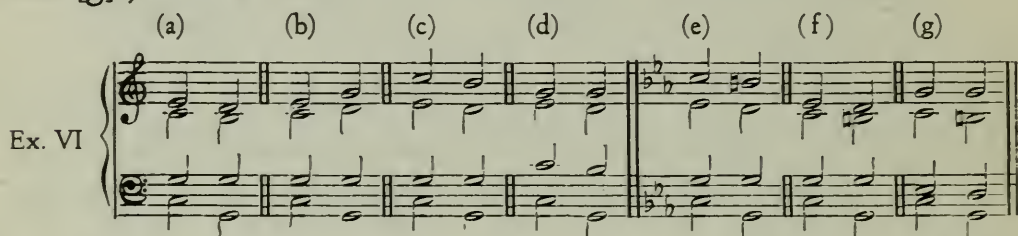


In the major key, the 3rd of the subdominant chord is sometimes minor. (See Ex. IV [d].) When the plagal cadence is used in the minor key, the 3rd of the final tonic chord is most frequently changed to major. (See Ex. IV [e], [f] and [g].)

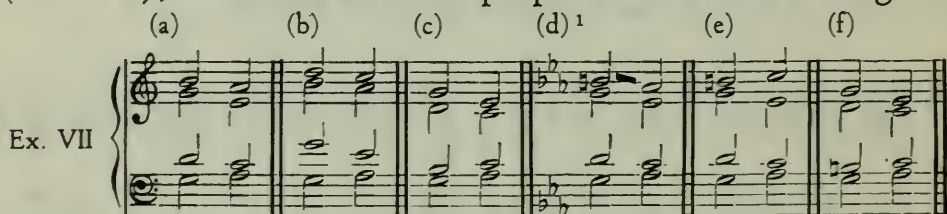
When the progression IV to I appears during the course of an exercise in a minor key, the minor chord on the tonic is very effective:



5. IMPERFECT CADENCE.—The IMPERFECT OR HALF CADENCE (I-V) is simply a reversal of the perfect cadence and produces a feeling of inconclusive ending. It resembles the plagal cadence in the dominant key. In consequence of this resemblance, the dominant tone should not be sustained in the soprano part; otherwise an undesirable effect of conclusiveness will result. (See Ex. VI [d] and [g].)



6. THE DECEPTIVE CADENCE.—The DECEPTIVE CADENCE is a progression from the dominant to some chord other than the expected tonic. (This is sometimes called the INTERRUPTED CADENCE.) The most common form is the one from the dominant to the submediant (V to VI); this will serve our purpose for the time being:



¹ The augmented second in the soprano melody should be avoided for the time being (Ex. VII [d]).

It will be observed that when the bass is doubled in both chords, all parts move in contrary motion to it, consecutive octaves and fifths thus being avoided.

7. THE MIXED CADENCE.—The progression IV–V–I at the end of a composition is called by some theorists a MIXED CADENCE because it consists of the first chord of both plagal and perfect cadences:

Ex. VIII

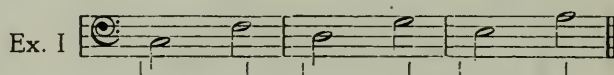
(a) (b) (c) (d) (e) (f)

The musical notation for Example VIII consists of six variations, labeled (a) through (f), each presented as a two-measure phrase in a grand staff (treble and bass clefs). The variations illustrate different harmonic settings of the mixed cadence (IV–V–I).
 (a) C major: Treble clef has a half note C4 and a half note E4; Bass clef has a half note C3 and a half note E3.
 (b) C major: Treble clef has a half note C4 and a half note G4; Bass clef has a half note C3 and a half note B2.
 (c) D major: Treble clef has a half note D4 and a half note F#4; Bass clef has a half note D3 and a half note B2.
 (d) B-flat major: Treble clef has a half note Bb4 and a half note D5; Bass clef has a half note Bb3 and a half note G2.
 (e) E-flat major: Treble clef has a half note Eb4 and a half note G4; Bass clef has a half note Eb3 and a half note C2.
 (f) A-flat major: Treble clef has a half note Ab4 and a half note C5; Bass clef has a half note Ab3 and a half note F2.

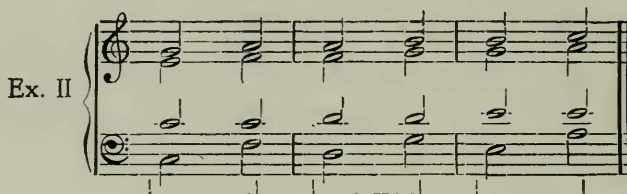
SEQUENCE.—*Tonal and Real*

1. When two or more chords move in a regular pattern repeated part for part upon other notes of the scale, ascending or descending, we have what is termed a SEQUENCE.

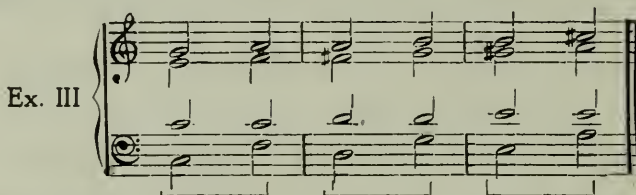
Roots moving up a fourth and down a third form a sequence of two chords, each one a degree higher on the scale:



2. It will be observed that every interval is repeated in each voice identically, the difference between major and minor, etc., being disregarded. This is called a TONAL sequence; it remains in the same key:



3. When the intervals retain their tonality (major for major, and minor for minor), the sequence is called a REAL sequence; this means a modulation out of the key:



4. When writing a sequence, the rules prohibiting the doubling of the leading note, the use of augmented skips, even the use of the forbidden leading-note triad in root position, are disregarded. In other words, if the model is correct the sequence must follow

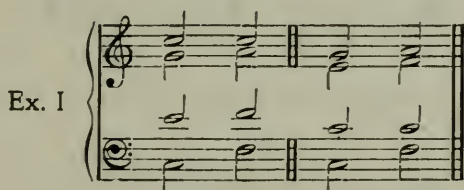
COMMON CHORDS IN ROOT POSITION

1. Before proceeding to our first exercises in four-part harmony, it is necessary to refer to Chap. XVI, Ex. IV, which shows clearly that a chord in root position, with the root doubled, may be written in three different ways:

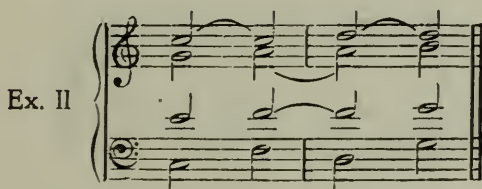
- a. Tierce position: with the 3rd in the soprano.
- b. Quint position: with the 5th in the soprano.
- c. Octave position: with the root in the soprano.

2. To avoid consecutive octaves and fifths when writing a succession of chords in root position, the following rules should be carefully observed:

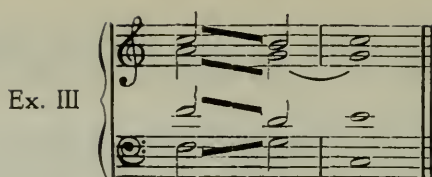
- a. When the root is doubled, avoid writing two chords in the same position; i.e., if the first chord is in octave position, the next should be either in tierce or quint position, e.g.:



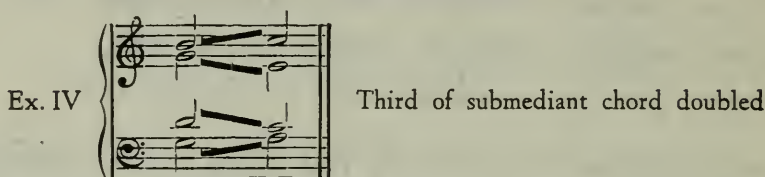
- b. When the chords are conjunct, keep notes common to both chords in the same voice:



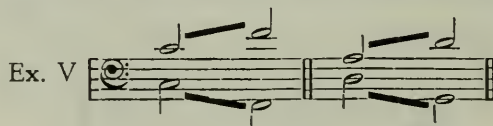
- c. Move each part to the nearest note in the next chord.
- d. When chords are disjunct, move all parts in contrary motion to the bass:



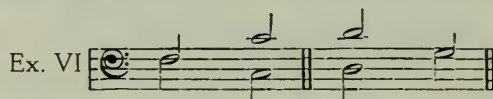
NOTE: When the voice leading demands that a part move in similar motion with the bass, double the third of one of the chords:



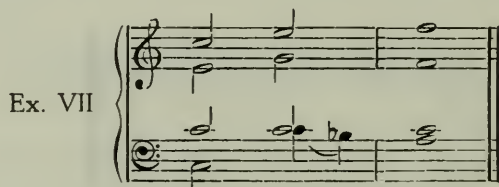
- e. Avoid too frequent use of similar motion; the effect is stronger when the upper parts move in contrary motion to the bass.
- f. Avoid consecutive octaves or fifths in contrary motion:



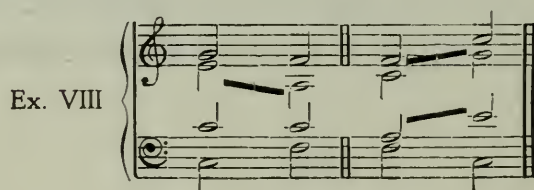
- g. Avoid unison to octave, or vice versa:



- h. Octave to unison is allowable when one part sustains the same note:



- i. Avoid crossing or overlapping the parts:



The student may now proceed with the exercises for chords in root position, after a careful analysis of the following example:

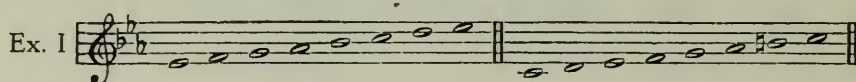
Ex. IX

The musical score for Example IX is written in B-flat major (one flat) and 4/4 time. It consists of two systems, each with two measures. The first system shows a piano introduction with chords in the right hand and a melodic line in the left hand. The second system continues the exercise with similar chordal and melodic patterns. The notation includes treble and bass staves with various chords and melodic lines.

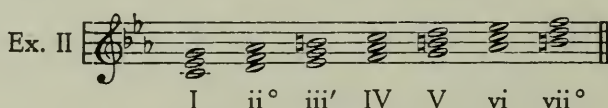
TRIADS IN MINOR KEYS

1. As stated in a previous chapter, the minor scale is built on the sixth degree of the major scale; hence the tonic of the minor scale is a 3rd below the tonic of its relative major. The notes of the minor scale in harmonic form are identical with the relative major, with the exception of the leading note, which is raised by an accidental.

The signatures of a major key and its relative minor are also identical:

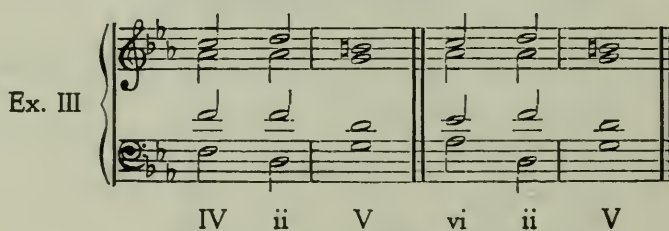


2. The triads built on the harmonic minor scale are as follows:



It will be observed that the minor key contains a greater variety of harmonic color than the major. In classifying these triads, we find that there are two major triads, V and VI; two minor triads, i and iv; two diminished triads, ii° and vii°; and an augmented triad on the mediant (iii').

3. The diminished triad on the leading note (vii) of the minor key is rarely used in root position except in sequence. The diminished triad on the supertonic (ii°) is more frequently used in root position, generally following the subdominant or submediant and resolving to the dominant—up a fourth or down a fifth:



4. When writing in the minor key, the interval of an augmented second between the sixth degree and the leading note should be avoided for the present, especially in vocal music:

Ex. IV

*Augmented 2nd

The example shows a musical staff in G minor (one flat). The upper staff contains two chords: a triad of G4, Bb4, and D5, followed by a triad of A4, Bb4, and C5. An asterisk is placed above the interval between D5 and A4, which is an augmented second. The lower staff provides a bass line accompaniment.

5. To avoid the augmented second in the melodic progression of a part, the sixth degree of the scale is raised chromatically. In this, the observing student will readily recognize the melodic form of the minor scale.

Ex. V

The example shows a musical staff in G minor. The upper staff contains a melodic line that ascends chromatically from G4 to A4, Bb4, B4, C5, D5, E5, and F#5. The lower staff provides a bass line accompaniment.

6. The augmented triad on the mediant is not generally used in root position. Its striking effect may be observed in the following example:

Ex. VI

The example shows a musical staff in G minor. The upper staff contains a sequence of chords: a triad of Bb4, D5, and F#5 (marked with an asterisk), followed by a triad of C5, E5, and G5, and then a triad of D5, F#5, and A5. The lower staff provides a bass line accompaniment.

The dissonant triads are more frequently used in their inverted position; they will be explained in detail in the following chapter on inverted triads.

7. To avoid consecutive octaves and fifths, and the augmented second when the dominant is followed by the submediant (V-VI), or vice versa (VI-V), the following rules should be observed:

- a. Always double the 3rd of the submediant chord.
- b. The leading note must ascend to the tonic when VI follows V.

- c. The tonic must descend to the leading note when V follows VI.
 d. Two of the upper voices must move in contrary motion to the bass.

Ex. VII

Good Good Bad

*Augmented 2nd
 *Consecutive 5ths

Ex. VIII

Good Good Bad

*Augmented 2nd

8. At the end of a composition in the minor key, we frequently find the 3rd of the final tonic chord chromatically altered to a major 3rd. When the third is altered in this manner, it is called the **PICARDIE THIRD**, or **TIERCE DE PICARDIE**.

Ex. IX

9. The primary triads in major and minor keys are indicated by large Roman numerals, the secondary triads by small Roman numerals. Diminished and augmented triads are marked ° and ' respectively. The following is a complete table of triads in major and minor keys:

	Primary	Secondary			Dissonant
Major					
	I	IV	V	ii	iii
				vi	vii°

TRIADS IN MINOR KEYS

23

Primary Secondary Dissonant

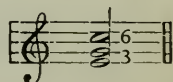
Minor

I IV V vi ii° iii' 5 vii°

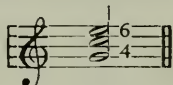
INVERSIONS OF TRIADS

1. Up to this point, all chords have been in root or direct position, the root, or fundamental note, being in the bass.
2. When any note other than the root of a chord appears in the bass, the chord is said to be inverted.
3. There being only three notes in the triad, two inversions are possible:

(a) The first inversion: with the 3rd of the triad in the bass, and the root appearing a 6th above: Ex. I



(b) The second inversion: with the 5th of the triad in the bass, the root a 4th above, and the 3rd of the triad a 6th above the bass: Ex. II



4. The first inversion is known as a $\frac{6}{3}$ chord, or chord of the 6th, the notes being a 3rd and 6th above the bass.

The second inversion is known as the $\frac{6}{4}$ chord, the notes being a 6th and a 4th above the bass.

5. When triads are inverted they are considered as $\frac{6}{3}$ or $\frac{6}{4}$ chords (the original triad being a $\frac{5}{3}$ chord). However, the identity of the original triad must not be completely disregarded, because in harmonic analysis the original triad is always indicated by a Roman numeral with the figures $\frac{6}{3}$ or $\frac{6}{4}$, as the case may be. The following example will make this clear:

Ex. III

6 6
4

C minor I I I V I

The rules generally accepted for figured bass are as follows:

- Chords in root position are not figured unless the 5th is affected by an accidental.
- An accidental under a note applies to the 3rd of a chord in root position.
- A line drawn through a figure indicates a raised note (\sharp or \natural).
- The $\frac{6}{3}$ chord is always figured 6. If the 3rd is chromatically

altered, only 6 is written above the sign: $\frac{6}{\sharp}$ or $\frac{6}{\flat}$.

- The second inversion is always figured $\frac{6}{4}$.

The following examples will make this clear:

6 6 4

6 $\flat 6$ $\flat 6$ $\natural 6$ $\frac{6}{4}$

Key F I I I

CHORDS OF THE SIXTH IN FOUR PARTS

1. In writing four-part harmony, there is no chord that requires as much care and good judgment as the chord of the sixth. The main difficulty in the treatment of a $\frac{6}{3}$ chord is: Which is the best note to double? Inasmuch as melody takes precedence over harmony, this question is generally decided by the voice leading.

The following important rules for common chords in $\frac{6}{3}$ position should be carefully observed:

- a. When common chords are used in first inversion, the best note to double is the 6th.
- b. When primary triads are used in first inversion, and the voice leading is improved by doubling a note other than the 6th, the next best note to double is the 3rd.
- c. When secondary triads are used in their first inversion, and the voice leading is improved by doubling a note other than the 6th, the next best note to double is the bass. When in doubt, double a primary note (I, IV or V).

The following examples will show the best note to double in the order given:

- (a) The best note to double.
- (b) The next best note to double.
- (c) The worst note to double.

Ex. I

Primary 6 6 6 6 6 6 6 6 6

(a) (b) (c) (a) (b) (c) (a) (b) (c)

Ex. II

Secondary 6 6 6 6 6 6 6 6 6

2. The dissonant triad on the seventh degree of the major scale, which, because of its harshness, was forbidden in root position, is frequently used in the form of a $\frac{6}{3}$ chord on the supertonic. Special attention should be given this chord, because the real root is the dominant. The $\frac{6}{3}$ chord on the supertonic may be considered as an incomplete form of the DOMINANT SEVENTH chord, the root of which is omitted. Ex. III

V 7th

The most important feature of this chord is the dissonant 7th from the dominant (its root) which, when inverted, forms the dissonant interval called the AUGMENTED 4th. This interval is contained in the $\frac{6}{3}$ chord on the supertonic: Ex. IV

Aug. 4th

An important rule in part-writing must be observed in the treatment of this interval: "Augmented intervals must diverge, diminished intervals must converge."

Ex. V

Aug. 4th Dim. 5th

If this rule is observed, the F in this case must fall and the B must rise. It is therefore obvious that the only note which can be doubled with good effect is the bass (supertonic). The 3rd, being an implied discord, should not be doubled unless the voice leading is improved thereby. The 6th, being the leading note, should never be doubled except in a sequence:

(a) (b) (c)

Ex. VI

(b) *Note scale passage in tenor part, and doubled 3rd of $\frac{6}{3}$ chord.

3. The $\frac{6}{3}$ chord may be used on any degree of the scale, but the first inversion of the triads I, ii, IV, V and vii° is more frequently used than that of iii and vi.

4. When the bass of a first inversion is doubled, it should be approached in the upper voice by step. It is always best when the bass and upper parts move scale-wise and in contrary motion to each other.

Ex. VII

6 6 6

*NOTE: The bass of a $\frac{6}{3}$ chord on the mediant is doubled, but the voice leading moves by scale progression in the soprano, tenor and bass, the rules of harmony giving way to good voice leading.

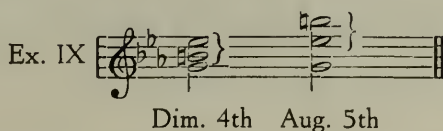
5. When a succession of $\frac{6}{3}$ chords appears in an exercise, it is best to place the 6th in the soprano part and alternately double the 6th, 3rd and bass (a); or place the 6th in the soprano, the 3rd in the alto, and alternately double the 3rd and the 6th in the tenor part (b):

(a) (b)

Ex. VIII

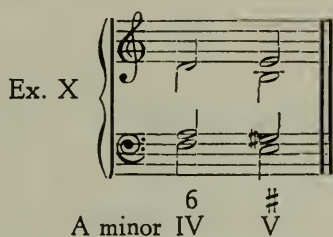
6 6 6 6 6 6 6 6 6 6 6 4

6. All the notes of the ascending and descending scale of the minor key may be used as a bass-note for a $\frac{6}{3}$ chord. The chord of the 6th on the dominant (first inversion of iii') is less used than the others, because of the interval of the diminished 4th or augmented 5th which occurs between its 3rd and 6th.

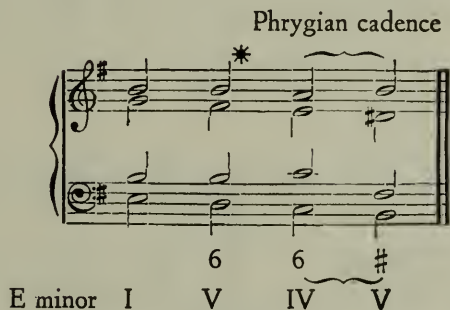


When this chord is used, the 3rd is usually omitted.

7. The first inversion of the subdominant triad followed by the root position of the dominant is known as the PHRYGIAN CADENCE.



This cadence is frequently approached by a progression of chords on the descending MELODIC Minor scale with the lowered 7th, the leading note being unnecessary because the bass does not rise to the tonic.



* Lowered 7th of E minor.

SECOND INVERSIONS OF TRIADS

1. The SECOND INVERSION of a common chord is called the $\frac{6}{4}$ chord, the 5th of the original triad being the bass; the root is a 4th above, and the 3rd a 6th above, respectively.

Ex. I

$\frac{6}{4}$ $\frac{6}{4}$ $\frac{\sharp 6}{4}$ $\frac{6}{b4}$ $\frac{\sharp 6}{4}$

2. The most frequently used second inversions in major and minor keys are those of the primary triads, with the dominant, tonic and supertonic in the bass. Second inversions may also be used on other degrees of the scale, especially in sequences.

3. The $\frac{6}{4}$ chord, used in various ways, may be classified as follows:

- a. *Cadential $\frac{6}{4}$ Chord.*—A $\frac{6}{4}$ chord on the accented beat on the dominant of the key, followed by the perfect or deceptive cadence.

Ex. II

IV $\frac{6}{I\ 4}$ V I iv $\frac{i\ 6\ 4}{4}$ 8-7 vi

- b. *The Modulating $\frac{6}{4}$ Chord.*—An accented $\frac{6}{4}$ chord, other than the second inversion of the tonic, on a note that be-

comes the dominant of a new key, which is followed by the usual cadence to the new tonic.

Ex. III

Key of G I V⁷ I V $\frac{6}{4}$ V⁷ I

Key of D —

- c. *Passing $\frac{6}{4}$ Chord.*—A $\frac{6}{4}$ chord on the unaccented beat of a measure, frequently on a repeated note (a), or a note in a diatonic passage (b):

Ex. IV

(a) (b)

6/4 6/4 6/4 6/4

4. Another form of imperfect cadence, sometimes called a “feminine ending,” is produced when the harmony of the dominant chord is delayed by the appearance of the tonic harmony over the dominant on the accent.

Ex. V

6/4

instead of

5. It will be observed that the bass is always doubled in a $\frac{6}{4}$ chord.

It will also be observed that the following fixed progressions

are used when the chord resolves on the same bass-note or its octave.

- The 6th moves to the 5th.
- The 4th moves to the 3rd.
- The octave to the bass remains.

Ex. VI

6 - 5
4 - 3
Octave remains.

6. The $\frac{6}{4}$ chord may be approached in various ways:

- By leap from a chord in root position.
- By leap from an inversion of the same chord.
- By step from an inverted or root position chord.

NOTE: The $\frac{6}{4}$ chord should not be approached by leap from a $\frac{6}{3}$ chord derived from another root.

Ex. VII

(a) (b) (c) (d)

6 6 6 6
4 4 4 4
ii I V⁷ I I I V I IV I V⁷ I vi I V⁷ I

7. QUITTING THE $\frac{6}{4}$ CHORD.—The bass of a $\frac{6}{4}$ chord may leap an octave, or to another position of the same chord—no other leaps are possible. In other words—as long as the same harmony continues, the bass may move to another note of the chord, as in Ex. VIII (b). When the harmony changes, the bass must return to the original note, or to the note next above or below it. (See Ex. VIII [c].)

Ex. VIII

(a) (b) (c)

6 6 6 6 6
4 4 4 4 3
Key of B I V I V⁷ I. I — V I. I — IV I — IV

8. As a rule, the only $\frac{6}{4}$ chords used in succession are the super-tonic followed by the tonic (V_4^6 to IV_4^6). In this case, the student must take great care to avoid consecutive perfect 4ths between the bass and one of the upper parts; the perfect 4ths, being inverted perfect 5ths, are strictly forbidden.

Ex. IX

(a) (b)

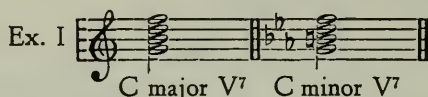
Perfect 4th

Figure 10 shows musical notation for Example IX. It consists of two parts, (a) and (b), each with a treble and bass staff. Part (a) shows a sequence of chords: I (C major), V (F major), and IV (Bb major). Part (b) shows a sequence of chords: I (C major), V (F major), and IV (Bb major). The notation includes notes and rests, and a 'Perfect 4th' is indicated between the V and IV chords in part (b). Roman numerals and figures (6, 4) are written below the staves.

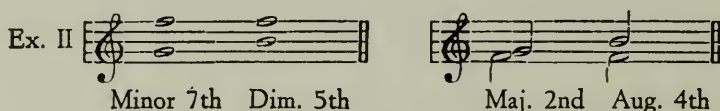
THE CHORD OF THE DOMINANT SEVENTH

1. By adding another minor third to the triad on the dominant, we have what is known as the DOMINANT SEVENTH CHORD, generally considered the most important of all the possible chords of the seventh, and the one most frequently used.

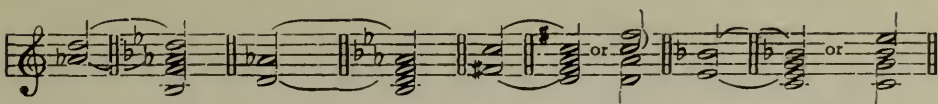
2. The dominant seventh (figured V^7 or $\overset{7}{5}$) consists of a root, major 3rd, perfect 5th and a minor 7th. This chord is identical in both major and minor keys.



3. It will be observed that the dominant seventh chord contains two dissonant intervals—the minor 7th and diminished 5th—which when inverted become a major 2nd and augmented 4th, respectively.



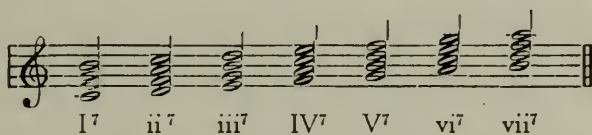
4. As stated in Chap. xx § 10, the augmented 4th (or its inversion, the diminished 5th) is frequently used to identify the key. These two intervals may be considered as an implied dominant seventh chord, the lower note of the augmented 4th being the 7th, and the upper note the 3rd of a dominant seventh chord; and, vice versa, the lower note of the diminished 5th being the 3rd, and the upper note the 7th of the dominant seventh chord. In other words, the 3rd of a dominant seventh chord will always be the leading note and the 7th the subdominant of the key, as will be seen from the following examples:

Ex. III 

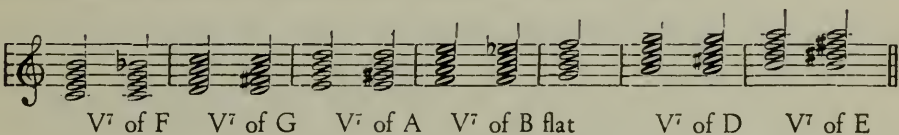
Aug. 4th E flat V⁷ Dim. 5th E flat V⁷ Dim. 5th G V⁷ Dim. 5th F V⁷ Aug. 4th

5. It is obvious that an augmented 4th will be found on the fourth degree of a major and harmonic minor scale, or the sixth degree of the relative minor scale with the same key-signature. The diminished 5th (its inversion) will be found on the seventh degree of a major and harmonic minor scale, or the second degree (supertonic) of the relative minor scale with the same key-signature.

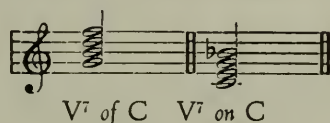
6. The importance of this chord in modulation cannot be over-estimated, because a chord of the seventh may be built on any degree of a scale, and only one—the dominant—will contain the intervals major 3rd, perfect 5th, and minor 7th from the root, e.g.:

Ex. IV 

However, any one of the above chords may be chromatically altered to a dominant seventh chord of another key, e.g.:

Ex. V 

7. It is important that we distinguish between the dominant seventh *on* C, and the dominant seventh *of* C. The dominant seventh *of* C is built on the dominant (5th degree) of C. The dominant seventh *on* C is the dominant (5th degree) of F, e.g.:

Ex. VI 

8. By chromatically altering the seventh chords, as in Ex. V, modulation from the key of C to any of the following keys will be possible:

C minor.

F major, F minor.

G major, G minor.

A major, A minor and F# minor.

B flat major, B flat minor.

D major, D minor and B minor.

E major, E minor and C# minor.

This will be clearly understood after a study of the first two resolutions of the dominant seventh chord in the following chapter.

CHAPTER XII

RESOLUTIONS OF THE DOMINANT SEVENTH AND ITS INVERSIONS

1. The dominant seventh chord may be inverted by the removal of the root from the bass to a position among the upper parts. Having three notes besides the root, three inversions are possible:

Ex. I

7	6	6	6
5	5	4	4
3	3	3	2

2. In figuring, the following method is generally used:

- a. ROOT POSITION: 7 only is used unless one or more of the figures are affected by an accidental.
- b. 1ST INVERSION: $\frac{6}{5}$ only is used unless the 3rd is affected by an accidental; in such cases the accidental sign only is placed under the figures.
- c. 2ND INVERSION: $\frac{4}{3}$ only is used unless the 6th is affected by an accidental.
- d. 3RD INVERSION: $\frac{4}{2}$ only is used unless the 6th is affected by an accidental.

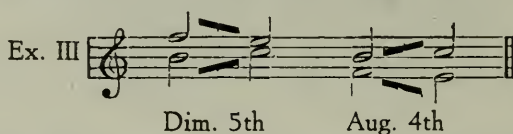
Ex. II

7	b6	#6	#4	b6
#	b5	4	2	4
	b	3		b2

3. The intervals above the bass in all chords in root position are ODD numbers. When chords are inverted, the lowest EVEN number in the intervals above the bass is the root.

4. RESOLUTION OF THE DOMINANT SEVENTH CHORD.—The term resolution is applied to the progression of a dissonance to a consonance. In the dominant seventh chord, the 7th from the root, being the dissonant note, must fall (or resolve) to a consonant note.

This chord contains two notes, the 3rd and 7th from the root, which form a diminished 5th (or its inversion, the augmented 4th). These two notes have a fixed progression: the 7th falls and the 3rd rises—DIMINISHED INTERVALS CONVERGE, and AUGMENTED INTERVALS DIVERGE:



5. The rules for the resolution of the dominant seventh chord in root position on the tonic ($V^7—I$) are as follows:

- a. The 7th *must* fall.
- b. The 3rd *must* rise.
- c. The 5th *may* rise or fall.

NOTE: When the dominant seventh chord in root position resolves on the tonic, the 5th in one of the chords is generally omitted to avoid possible consecutive 5ths. It is best to omit the 5th of the V^7 and double the root, which then remains in the same voice, becoming the 5th of the tonic chord. (See Ex. IV [b].)

There is one exception to Rule b above: when the bass rises to the tonic, the 3rd of the V^7 may fall to the 5th of the tonic chord. The 7th of the chord *always* falls. (See Ex. IV [d].)

Ex. IV

(a) (b) (c) * (d) (e) (f)

V⁷ I V⁷ I V⁷ I V⁷ I C minor V⁷ I V⁷ I

*NOTE: The parallel (or consecutive) 5ths between the tenor and bass (Ex. IV [c]) may be avoided by omitting the 5th:

6. The second resolution is a form of deceptive cadence on the submediant (V⁷ to VI).

Ex. V

V⁷ vi V⁷ vi

7. The third resolution on the first inversion of the subdominant chord is sometimes used, in which case the discord generally remains in the same voice and becomes the root of the subdominant.

Ex. VI

V⁷ ⁶IV₃ V⁷ ⁶IV₃

8. RESOLUTIONS OF INVERTED DOMINANT SEVENTH CHORDS.—The first inversion may resolve upon the tonic in root position (a), the submediant in first inversion (b), or the subdominant in second inversion (c).

Ex. VII

(a) (b) (c)

6 5 V⁷ I 6 5 V⁷ vi 6 5 V⁷ 6 4 IV

9. The second inversion may resolve upon the tonic chord in root position or its first inversion. It may also resolve upon the second inversion of the subdominant (VIII [c]).

Ex. VIII

(a) (b) * (c) (d) (e) (f) * * (g)

4 3 4 3 6 3 6 4 4 3 4 3 4 3 6 3 4 3 6 3 6 4 4 3

*NOTE: The doubled 3rd of the tonic triad is justified because the parts move by step and in contrary motion.

** It will be observed that consecutive fifths occur between the tenor and soprano; these are allowed when one is diminished and the other perfect, provided they do not occur between the bass and an upper part. However, it is better that the perfect 5th be heard before the diminished. (See Ex. VIII [g].)

10. The root is often omitted in the second inversion, in which case the bass is doubled; the chord then becomes the first inversion of the leading note triad which was described in Chap. XXII, §2, Ex. VI (a), (b) and (c).

Ex. IX

6

11. The third inversion generally resolves upon the first inversion of the tonic.

Ex. X

12. The dissonant 7th to the root may be transferred to another part in a different position, or inversion, of the chord; in fact, several inversions may be used in succession. But when the harmony changes, the 7th must finally be resolved in the part in which it was last sounded.

Ex. XI

13. ORNAMENTAL RESOLUTION.—The resolution is called ornamental when a note of the same chord is interposed between the 7th and its note of resolution.

Ex. XII

14. The 7th may sometimes resolve by chromatic alteration to another V^7 chord or its inversion, generally into one of the five related keys.

Ex. XIII

7 6 7 #6 7 4 b7

5 4 3 b

V⁷ of C A min. C G C F B flat

Ex. XIV

C maj. I #6 4 6 6 I A min.

2 5 5 3

15. It is possible to make a succession of dominant seventh chords by chromatically raising the 7th, which becomes the 3rd of the next dominant seventh chord; and, vice versa, chromatically lowering the 3rd, which becomes the 7th of the next dominant seventh chord.

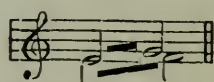
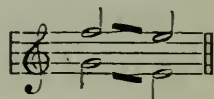
Ex. XV

(a) Raised 7th (b) Lowered 3rd

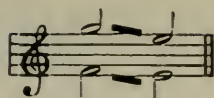
NOTE: This progression should not be used for more than two or three chords.

16. The following rules for part-writing should be carefully observed when resolving the dominant seventh chord:

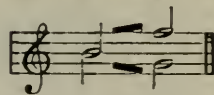
- Avoid the interval of a 7th to an octave in similar motion:
- Avoid the interval of a 2nd to a unison in similar motion:
- Avoid a unison to a 2nd in similar motion:



d. Avoid a 9th to an octave in similar motion:



e. Avoid a unison to a 7th:

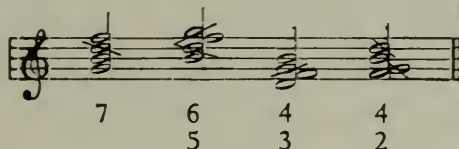


When writing in three parts, omit the 5th in root position.

When writing in three parts, omit the 3rd or 6th in first inversion.


When writing in three parts, omit the 4th in second inversion.

When writing in three parts, omit the 2nd or 6th in third inversion.



The importance of the dominant seventh chord will not be fully realized until the student has advanced further in the study of harmony. In fact, practically all the complex chord formations are centered around, or grow out of, the dominant seventh chord. Further success in the study of harmony will depend entirely upon the mastery of this chord.

BYE-TONES, PASSING-TONES, AUXILIARY-TONES

1. When the tones of a chord are sounded melodically, i.e., one after another, e.g.:  they are said to be **BROKEN** or in **ARPEGGIO**. This device is generally used when writing for the piano, harp, or other instruments when more flexibility or motion is desired.

2. When chords are written in arpeggio, all rules governing the progression of parts, the resolution of discords, etc., must be carefully observed:

- a. Avoid consecutive octaves and fifths between tones occupying the same position in successive arpeggios.
- b. Discords and their resolutions *must* occur between the tones occupying the same position in successive arpeggios, e.g.:

Ex. I

(a)



bad good

(b)

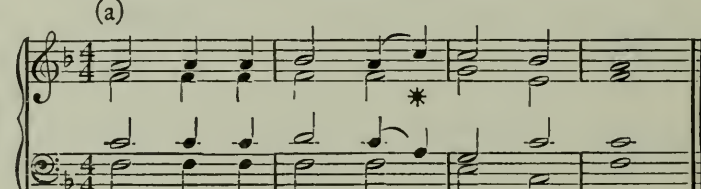


bad good

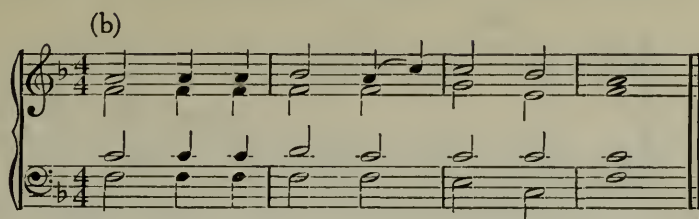
3. Frequently a tone of a chord is changed for another tone of the same chord in one or two of the upper parts, while the bass and other voices sustain the prevailing harmony, e.g.:

Ex. II

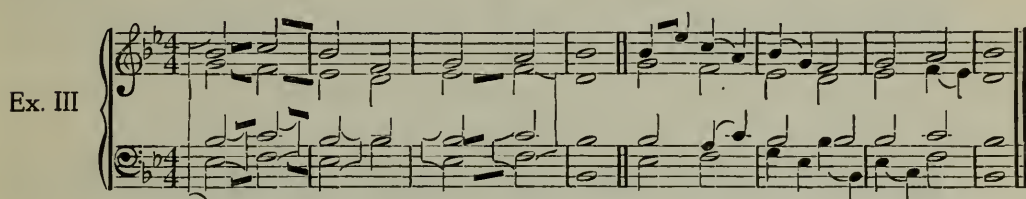
(a)



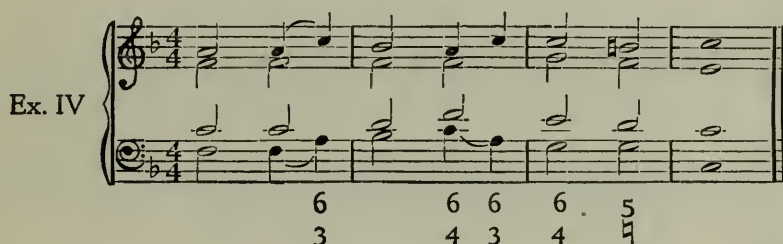
* If the tenor part remained stationary the third of the chord would be omitted. It would then appear as follows:



4. These tones are called **BYE-TONES**. They are a partial application of the principle of arpeggio, and may be used when motion is desired in the upper parts, without introducing a discordant element into the prevailing harmony. They may also be used to avoid the effect of consecutives, the aural effect being sufficient for this purpose, e.g.:

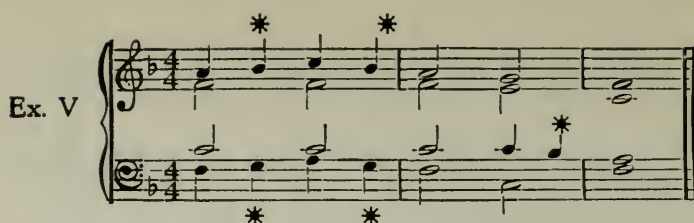


5. The use of bye-tones in the bass changes entirely the nature and name of the chord, e.g.:

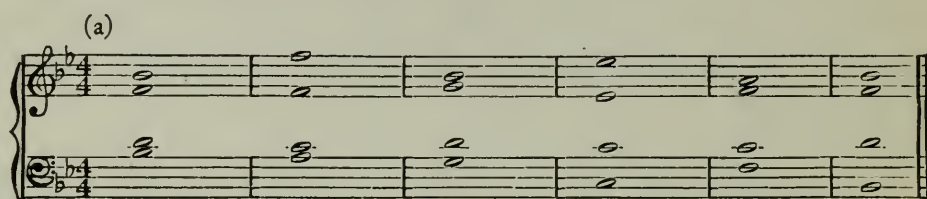


6. When a smooth independent melodic line is desired, tones foreign to the prevailing harmony are occasionally introduced in one or more of the parts, including the bass. This device avoids the stiff ponderous effect sometimes resulting when parts move in tones of equal duration. These tones are called **PASSING-TONES** and **AUXILIARY-TONES**.

7. Passing-tones are scalewise sounds lying between the tones contained in the prevailing harmony, e.g.:



8. Careful study will show that passing-tones are used in order to make smooth the roughness of a leap by scalewise progression. The following examples will clearly illustrate:

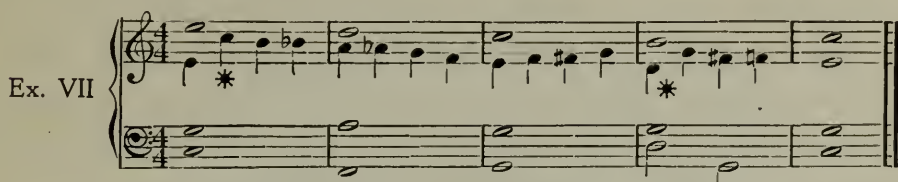


* See Par. 10 (a).

- (a) All parts move in notes of equal duration.
- (b) The notes of shorter duration move by leap to a note contained in the prevailing harmony, producing bye-tones.
- (c) Scalewise progression is obtained by the use of passing-tones interposed between the harmonic tones; this device produces independence, i.e., the beginning of a contrapuntal treatment in each part.

9. When passing-tones are diatonic, they are called DIATONIC

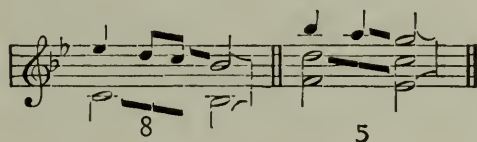
PASSING-TONES; when chromatically altered, they are called CHROMATIC PASSING-TONES, e.g.:



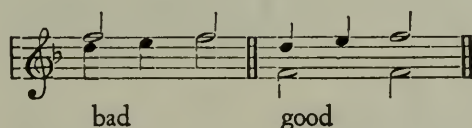
* NOTE: The bye-tone is taken by leap and the passing-tones proceed onward to a harmony note of the next chord.

10. When passing-tones are used, the following rules must be carefully observed:

- a. Passing-tones must occur on the unaccented portion of the measure. They may, however, occur on the secondary accent provided the note to which they pass is foreign to the prevailing harmony.¹ In this case they must proceed onward to the next note of the scale, which may be a note of the prevailing harmony or the next harmony.
- b. Passing-tones must, for the present, be approached and quitted by step of a second.
- c. Consecutive octaves and fifths between passing-tones and any other part are strictly forbidden, e.g.:



- d. Passing-tones proceeding to a unison by oblique motion are strictly forbidden. They may, however, proceed by oblique motion to an octave with good effect, e.g.:



¹ See Ex. VI (c), second measure.

NOTE: Exceptions to rules a and b will be fully dealt with in a later chapter.

11. Passing-tones may be taken in four parts provided they proceed by step in contrary motion until they reach a consonant chord. When this device is used the chords passing between the consonant chords are termed *PASSING-CHORDS*, because the resolution of the dissonances would be impossible in such a progression, e.g.:

Ex. VIII

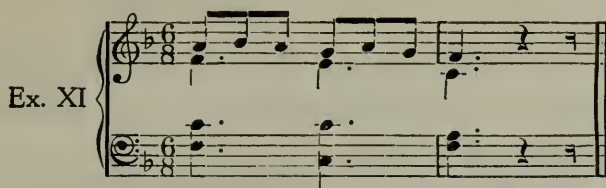
12. Passing-chords may also be used in oblique motion with good effect, e.g.:

Ex. IX

13. An *AUXILIARY-TONE* is the tone next *above* or *below* a tone contained in the prevailing harmony. Inasmuch as all seconds are discords, the auxiliary-tone will always be dissonant to at least one tone of the chord against which it is sounded. Being a tone unessential to the harmony, it is termed an unessential discord, and may be approached by step or leap, but is always quitted by step of a second. It may occur on the stronger or weaker accent of the harmony tone to which it belongs, e.g.:

Ex. X

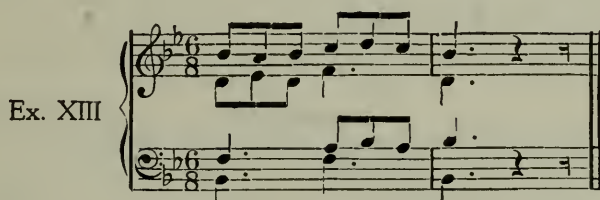
14. An auxiliary-tone occurring *above* may be a tone or semitone above the harmony tone to which it belongs, depending upon its position in the diatonic scale, e.g.:



15. An auxiliary-tone occurring *below* should be a semitone, or half-step, unless the harmony tone to which it belongs is the third of a major chord; in this case it may be either tone or semitone, e.g.:



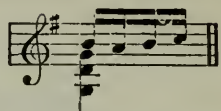
16. Auxiliary-tones may be used effectively in more than one part, provided that tones of the prevailing harmony remain in the other parts, e.g.:



17. When auxiliary-tones occur in two parts simultaneously, the auxiliary-tone below a major third *must* be a semitone, e.g.:



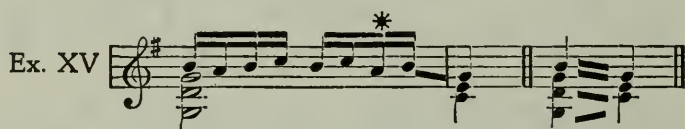
18. To maintain the regularity of a flowing melody in successive groups of four or six notes, auxiliary-tones above and below a harmony tone are frequently used, e.g.:



It will be observed that, in many cases, the use of this figure would leave the auxiliary-tone, or discord of transition, unresolved, e.g.:

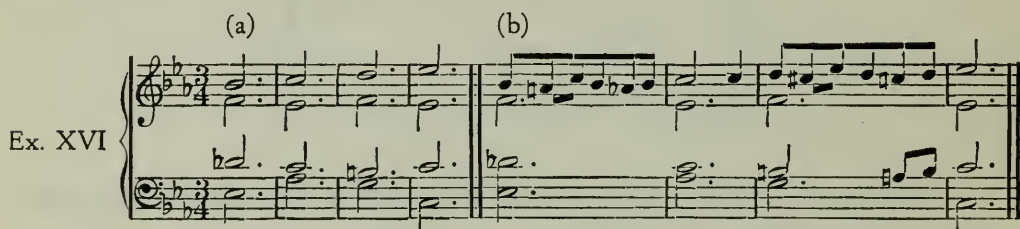


19. The forbidden leap from a dissonance to a subsequent harmony tone may be easily avoided by using what is known as the *CHANGING-TONE*, i.e., the auxiliary-tone leaps a third to the other side of the harmony tone and then returns, e.g.:



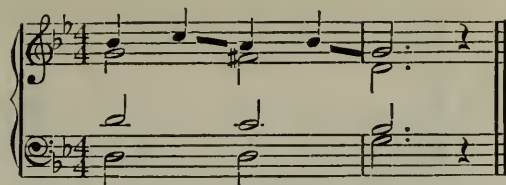
* NOTE: It will be observed that both dissonances are resolved when one returns to the harmony tone between the two.

20. The employment of this device in a group of six notes is clearly illustrated in the following:



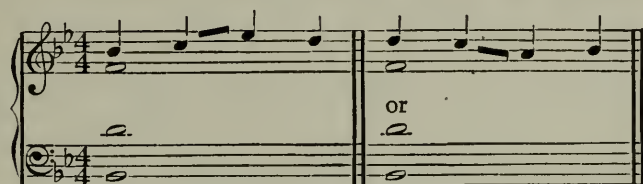
21. When the harmony tones are a second apart, an auxiliary-tone *above* may leap a third *downwards* to the next harmony tone. This device is known as a *SINGLE CHANGING-TONE* and is more frequently used with an upward step and a downward leap than vice versa, e.g.:

Ex. XVII



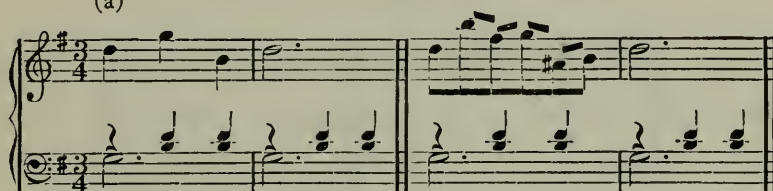
22. Another form of changing-tone is used when harmony tones are a third apart. In this case, instead of proceeding by passing-tones to the next harmony tone, the auxiliary-tone leaps a third and then returns by step, e.g.:

Ex. XVIII



23. Auxiliary-tones taken by leap generally return within the leap by step. They may, however, occur on the accent or unaccented portion of the beat, e.g.:

(a)

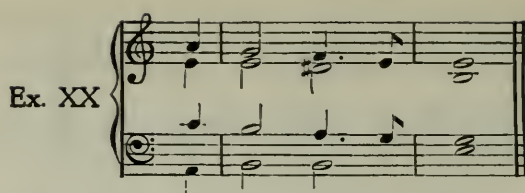


Ex. XIX

(b)



24. Another device resembling the auxiliary-tone is known as a tone of ANTICIPATION. This is brought about, when harmony tones are a step apart, by allowing one or more parts to proceed to the harmony that follows while the others remain, e.g.:



25. Rules for the use of auxiliary-tones may be briefly summarized as follows:

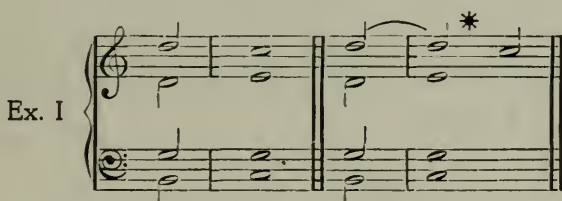
- a. When auxiliary-tones are approached by step, they are preceded by the same harmony tone to which they resolve.
- b. When taken by leap, they generally return within the leap by step.
- c. Changing-tones may be employed when a harmony tone is repeated, or when the second harmony tone is a third above or below.
- d. Single changing-tones are employed only when the harmony tone that follows is a step below. When the harmony tone that follows is a step *above*, and the progression is in the opposite direction, i.e., a falling second and rising third, the effect is questionable, e.g.:



SUSPENSIONS

1. In the preceding chapter a variety of rhythmic possibilities was introduced by the use of bye-tones, passing-tones, and auxiliary-tones, motion being created, especially, by the unessential dissonances foreign to the prevailing harmony. Inasmuch as these dissonances occur on the unaccented beat of the measure, the result is somewhat weak in rhythmical force. By the use of what is known as a *SUSPENSION*, the point of interest is shifted to the accented beat of the measure. This device creates a stronger and more definite rhythmical effect.

2. A suspension is the sustaining of a tone of one chord over a succeeding chord of which it forms no part, e.g.:



* NOTE: It will be observed that the D sounded in the soprano part on the unaccented part of the measure is called the *preparation*. The sustaining of the D over the next chord, of which it forms no part, on the accented part of measure, is the *suspension*. The progression of the suspension to the tone contained in the prevailing harmony is the *resolution*.

3. Any tone of a chord may be suspended over the succeeding chord if the resolution proceeds by step upwards or downwards, provided, however, that the suspension occurs on the accent and the tone of preparation is not shorter in duration than the suspension.

4. When the octave, fifth, third, or root of a triad in root position is suspended, it is termed a *Direct Suspension*. These

suspensions are generally figured, respectively, 9-8, 6-5, 4-3, and $\frac{4-}{2-}$. The following examples will make this clear:

Ex. II

(a) • (b) (c)

9 8 6 5 4 3

(d)

4 -
2 -

5. When suspensions are employed with inverted triads they are termed **INVERTED SUSPENSIONS**. The 9-8 suspension in inverted positions will appear as follows:

Ex. III

(a) (b) (c)

9 8 7 6 6 -
3 - 5 4

(d)

4 -
2 -

*

- (a) 9-8 suspension in root position.
 (b) 9-8 " " first inversion.

(c) 9–8 suspension in second inversion.

(d) 9–8 " " third inversion.

NOTE: When the 9–8 suspension is used in inverted position, the root of the triad is frequently omitted. However, when the ninth is in the bass, the root is often admitted. It will be observed that the ninth should be no less than nine notes distant from the root, except when it is approached by step and in contrary motion as in Ex. III (d)*. In this case, the tone of resolution may be heard above the suspension.

6. The inverted form of the suspended ninth should not be confused with the chord of the seventh. The $\frac{7}{3}$ figuring of the first inversion does not contain a fifth; adding a fifth would create an additional discord which would be a seventh from the root. The same applies to the second inversion, figured $\frac{6}{5}$, which does not contain a third; the chord is a six-four, the five delaying the four. Likewise, the $\frac{4}{2}$ figuring of the third inversion does not include a sixth, which would obviously be the figuring of the third inversion of the seventh chord.

7. After careful study of Ex. III, it will be well to remember that when two figures appear under a bass note, the last being a consonance, the first figure will invariably be a suspension unless there is conclusive proof that another chord is intended, e.g.:

Ex. IV

$\begin{matrix} 9 & 8 \\ 7 & - \\ 3 & - \end{matrix}$

* This chord is the dominant ninth which will be fully treated in the chapters that follow.

8. The suspended ninth should not be prepared by an octave, neither should the suspended sixth be prepared by a fifth. In each case the resolution would produce forbidden consecutives. No faulty progression is corrected by introducing a suspension, e.g.:

Ex. V

8 8 8 8 5 5 5 5

9. As stated in §3, a suspension may resolve *upwards*. In this case, a ninth over a root may be a 2-3 suspension, and a fourth over a root may be a 4-5 suspension, e.g.:

Ex. VI

2 3 4 5

* NOTE: When the suspended note resolves upwards it is called, by some writers, a RETARDATION.

10. The 4-3 suspension may occur on all degrees of the scale except the leading note. It is seldom used on the subdominant because the augmented fourth generally resolves upwards.

11. The 4-3 suspension and its inversions will appear as follows:

Ex. VII

(a) (b) (c) (d)

4 3 6 9 8 7 6 4 5 -
6 - 4 - 2 2 -

(a) 4-3 suspension in root position.

(b) 4-3 suspension in first inversion.

(c) 4-3 suspension in second inversion.

(d) 4-3 suspension in third inversion.

Without suspensions, the above progressions will appear as follows:

Ex. VIII

(a) (b) (c) (d)

6 6 6 4 6

NOTE: The third of the root should not be heard at the same time as the suspended fourth, unless the note of suspension is at least nine notes distant; see Ex. VII (b)*.

12. For the present, the following rule should be carefully observed:

A discord and its tone of resolution should never occur simultaneously within the same octave. There are few exceptions to this rule, of which the following is a good example:

Ex. IX

7 8 4 6 -

2 5 6

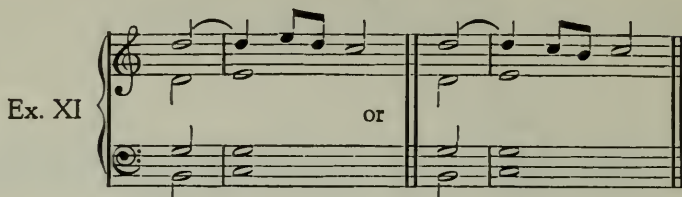
3 -

13. An ornamental resolution of a suspension may be effected by interposing a tone of the prevailing harmony, which may be taken by step or leap, between the suspension and tone of final resolution, e.g.:

Ex. X

or or

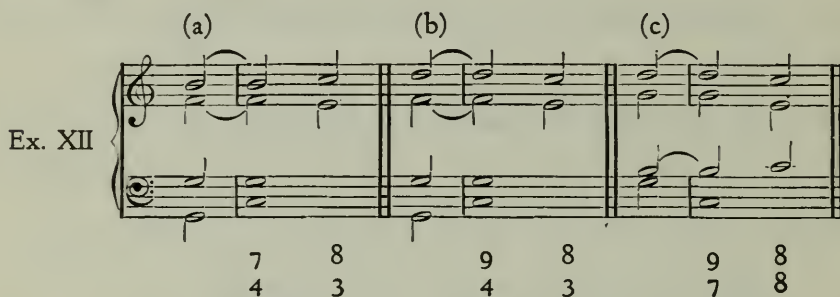
14. By the use of auxiliary-tones or passing-tones, the following ornamental resolutions are also possible:



15. When two tones are suspended over a chord of which they form no part, they are termed a **DOUBLE SUSPENSION**. Likewise, three tones suspended are termed **TRIPLE SUSPENSION**.

16. Double and triple suspensions are produced by the use of 9-8, 4-3, and 7-8 in combination.

17. Various combinations of the above suspensions will appear as follows:

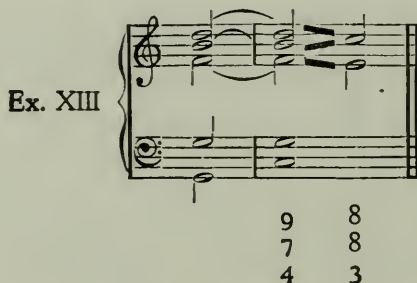


(a) Double suspension 7-8 and 4-3.

(b) Double suspension 9-8 and 4-3.

(c) Double suspension 9-8 and 7-8.

18. A combination of the three will produce the following:



19. There are many other combinations of double and triple suspensions, but the student should memorize the above forms and their figuring. These suspensions, when used on the dominant

of a key, produce some of the most important chords, which will be treated as independent harmonies with and without preparation, in the chapters that follow.

20. These suspensions used on the dominant seventh chord will produce the following:

Ex. XIV

- (a) 9-8 suspension over the dominant seventh, producing a dominant ninth.
- (b) 9-8, 7-8, and 4-3 over the dominant seventh, producing a dominant eleventh.
- (c) 6-5 over the dominant seventh, producing a dominant thirteenth.

21. A careful study of the following combinations will aid the student to a better understanding of double and triple suspensions.

Ex. XV

9	8	4	-	9	8	7	8
7	6	3	3	7	6		5
				5	6		3

- (a) Double suspension 9-8 and 7-6.
- (b) Double suspension Root and 3rd.
- (c) Double suspension and retardation 9-8, 7-6, and 5-6.
- (d) Suspension of the dominant seventh chord over tonic root.

22. It will be observed that double suspensions generally move in parallel thirds and sixths, and that the upward resolving suspension is more effective in combination, moving in contrary motion, than when taken alone.

THE APPOGGIATURA

1. The APPOGGIATURA, or accented passing tone, may be defined as an unprepared discord, unessential to the prevailing harmony, occurring on the accented portion of the measure.

2. In contrast to the smoothness of the prepared unessential discord, or suspension, the appoggiatura intensifies the accented dissonance, adds color to the harmonic structure, and emphasizes the rhythmical effect.

It will be observed that the feeling of intensity is greatly increased when the following examples are played in the order given:

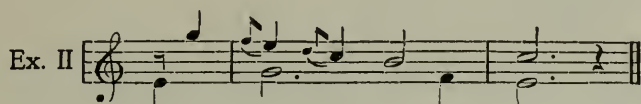
(a) Beethoven

Ex. I (b) Beethoven

(c) Wagner

- NOTE: (a) The dissonance is prepared and suspended.
 (b) The dissonance is prepared but *not* suspended.
 (c) The dissonance is taken by leap.

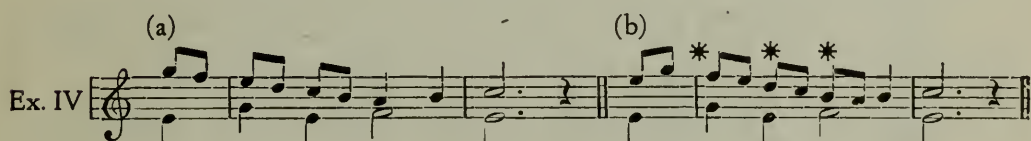
3. Previous to the beginning of the seventeenth century, no unprepared dissonances were permitted on accented portions of the measure. Composers, seeking greater freedom, conformed to this rule by writing the accented dissonances in small notes next to the harmony notes. The harmony note appeared in its proper place on the printed page, e.g.:



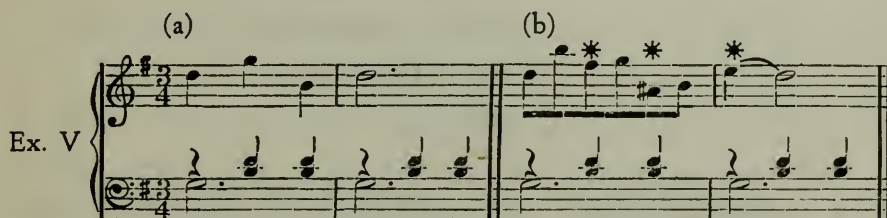
Reference to *Theory of Music*, Chapter XII (Ornaments and Embellishments), §2, will show that the above passage will be played as follows:



4. The difference between the accented and unaccented passing-tone will be clearly seen by a comparison of the following:

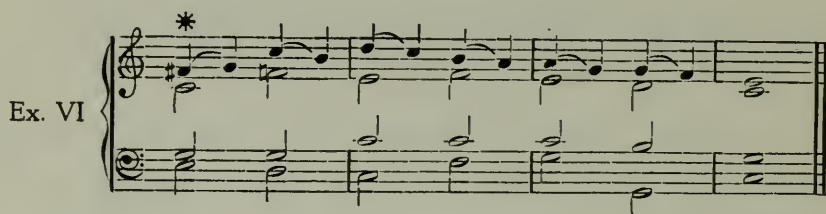


5. Appoggiaturas are frequently approached by leap from above and below, e.g.:

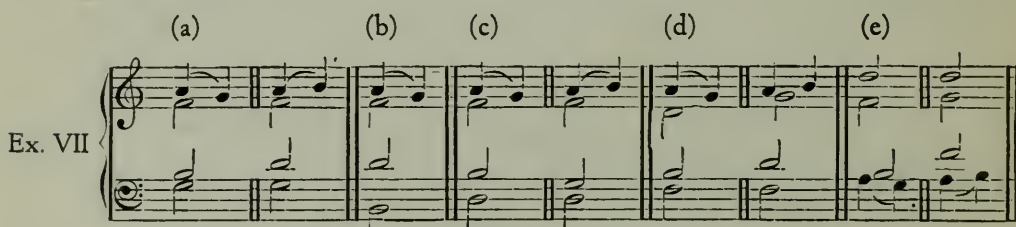


NOTE: The downward resolution of an accented passing-tone, or appoggiatura, is usually diatonic. But when resolving upwards it should be a semitone, or half-step, below the tone of resolution. If the tone of resolution is the third of a major chord, it may be either a tone or semitone.

6. The appoggiatura is more effective when the tone to which it resolves is *not* sounded simultaneously with it. As a general rule, an appoggiatura and its tone of resolution should be at least nine degrees apart. There are few exceptions, of which the following is a good example:



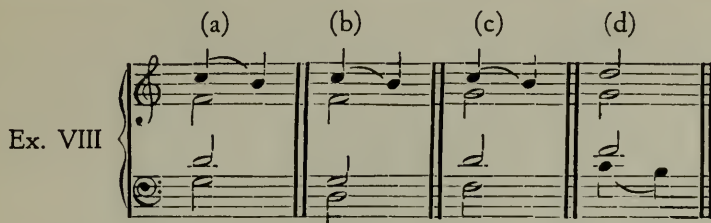
7. It will be observed that appoggiaturas may occur on any degree of the scale. However, when they occur above the root, third, and fifth of the dominant seventh chord, they produce the combinations frequently referred to as dominant ninths, elevenths, and thirteenths, respectively, e.g.:



- (a) Appoggiatura ninth in root position.
- (b) " " " first inversion.
- (c) " " " second inversion.
- (d) " " " third inversion.
- (e) " " " the bass.

8. The 4-3 appoggiatura is not available in first inversion be-

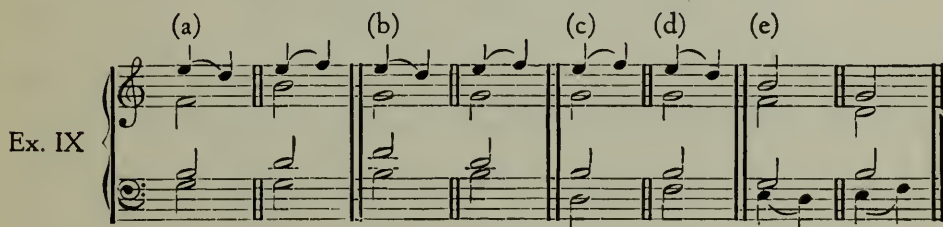
cause the third of the dominant seventh chord, being the leading-tone, cannot be doubled. The accepted formations are as follows:



- (a) Appoggiatura eleventh in root position.
 (b) " " " second inversion.
 (c) " " " third inversion.
 (d) " " " the bass.

NOTE: The upward resolution of the eleventh is too harsh for general use. It may be effectively used, however, in combination with another appoggiatura. (See Ex. XII.)

9. The appoggiatura thirteenth and its inversions will appear as follows:



- (a) Appoggiatura thirteenth in root position.
 (b) " " " first inversion.
 (c) " " " second inversion.
 (d) " " " third inversion.
 (e) " " " the bass.

10. When the examples quoted above are used in the minor key, it must be remembered that an appoggiatura taken below is always a semitone, except when it resolves to the third of a major chord, in which case it may be either a tone or a semitone. To avoid the forbidden augmented second in the melodic line and conform to

the above rule, the appoggiatura ninth, resolving upwards, *must* be the major sixth of the scale, proceeding to the major seventh which is the third of the dominant seventh chord.

The following example will clearly illustrate:

Ex. X

*Augmented second. good

11. The eleventh and thirteenth may be used a fourth and sixth from the root, respectively, with good effect, provided the tone of resolution is *not* sounded simultaneously with the appoggiatura, e.g.:

Ex. XI

12. Appoggiaturas may be effectively used in various combinations, provided the forbidden consecutives are avoided. It will be observed that the harsh effect of the ascending resolution of the eleventh is greatly modified when used in combination with another unessential tone, e.g.:

Ex. XII

bad

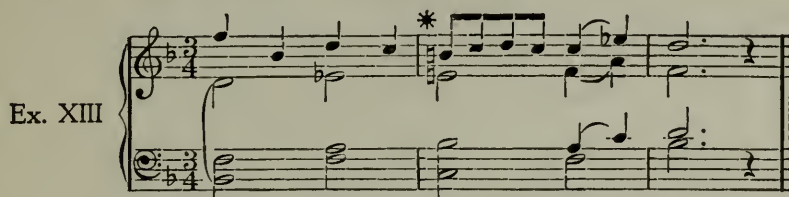
(a) Combination of ninth and eleventh.

(b) " " " " " ascending.

(c) " " " " thirteenth in contrary motion.

- (d) Combination of ninth and thirteenth in similar motion.
 (e) " " " " " in forbidden fifths.

13. A pleasing effect may be obtained by sounding a chromatically altered appoggiatura against the diatonic form of the same note contained in the prevailing harmony, e.g.:



14. Many excellent examples of the effective use of appoggiaturas may be found in piano and orchestral compositions. The thirteenth, eleventh, and ninth over dominant seventh harmony is effectively illustrated in the following well-known passage:

Ex. XIV

Weber *Oberon*

Example XIV is a musical score in 4/4 time, key of D major. The melody in the treble clef features a series of appoggiaturas (marked with slurs and accents) over a dominant seventh harmony. The bass line provides a harmonic accompaniment. The appoggiaturas are labeled as 13th, 11th, and 9th, indicating the intervals between the appoggiatura and the dominant seventh harmony. The passage ends with the word "etc.".

ADDITIONAL CHORDS IN MINOR KEYS

1. In the preceding chapters the principal chord formations in minor keys were based on the harmonic form of the minor scale. It will be observed that to avoid the leap of an augmented second, the melodic form is frequently used, i.e., the raised, or major, sixth and seventh degrees ascending, and the lowered, or minor, seventh and sixth descending. The melodic minor scale, ascending and descending, provides additional chord formations which, when carefully treated, produce remarkably beautiful effects.
2. The additional triads formed on the ascending and descending melodic minor scale are as follows:

Ex. I

Diagram illustrating the additional triads formed on the ascending and descending melodic minor scale. The diagram shows two parts: (a) Ascending form and (b) Descending form. The ascending form shows triads on degrees II, IV, VI, and III, while the descending form shows triads on degrees V and VII. The triads are labeled with Roman numerals and the degree of the scale they are based on.

(a) Additional triads in ascending form.

(b) Additional triads in descending form.

NOTE: The diminished triad, as in the major key, is not available in root position.

3. When the triads on the fifth and seventh degrees of the descending melodic minor scale are used in root position, the harmony is rather suggestive of the relative major key. To avoid the feeling of vague tonality, a chord containing a minor, or lowered, seventh should be followed as soon as possible by a chord that contains a leading-tone, e.g.:

Ex. II

Diagram illustrating a sequence of chords in a descending melodic minor scale. The sequence shows a series of chords, with the fifth and seventh degrees of the descending scale used in root position. The chords are marked with asterisks (*) to indicate the leading-tone.

4. When these additional triads are used in four-part harmony, the raised, or chromatically altered sixth and seventh should *not* be doubled. As a general rule, it is better to double a primary degree of the scale.

5. To use these triads successfully, the melodic line should follow the form of the melodic minor scale, i.e., ascending from the dominant to the tonic by major sixth and leading-tone, and descending from tonic to dominant by minor seventh and minor sixth.

6. The dominant triad containing the minor seventh followed by tonic harmony may be used as a cadence. This effect, characteristic of the ecclesiastic modes, is often employed by modern composers. The following well-known extracts are excellent examples:

Ancient Plain Song

Ex. III

Dvorak

Ex. IV

7. A study of the aural effect and careful analysis of the following example will greatly aid the student in introducing these additional chord formations effectively:

Ex. V

THE MELODIC LINE

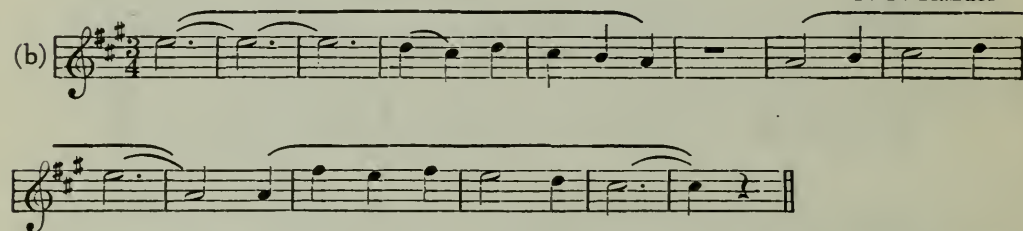
1. Before proceeding with the exercises introducing passing-tones, auxiliary-tones, and appoggiaturas, which obviously lend more freedom to melodic expression, it may be well at this time to study the important factors conducive to good melodic writing.
2. The student's first attempts in melody writing should be for voices; he should aim at a smooth melodic curve, always mindful of the limitations of the human voice with regard to compass, and the difficulty of negotiating dissonant intervals.
3. A study of the following well-known passages will clearly illustrate the essential characteristics of a good vocal melody:

Ex. I

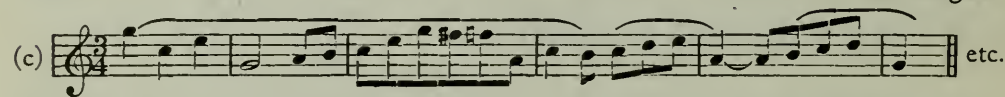
G. F. Handel



G. F. Handel

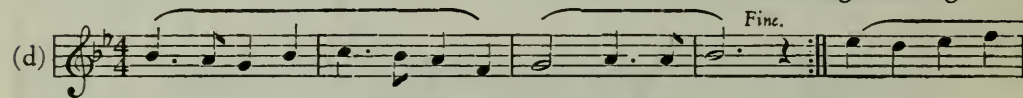


R. Wagner



"All Through the Night"

Fine.



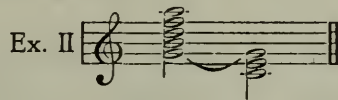
D. C.

NOTE: Observe the scalewise progression, the return within a leap, and the repetition of rhythmic figure.

4. The above examples will clearly show that the requirements of a good melody are as follows:

- a. A smooth diatonic line, with occasional leaps for contrast.
- b. Balance and unity of construction.
- c. Varying rhythmic figuration.
- d. Symmetrical phrases with repetition of motives on the same pitch or in sequence.

5. It is interesting to note that the degrees of the scale may be divided into two groups—active and inactive. The inactive tones are contained in the tonic triad, and the active tones are the remaining degrees of the scale which are, in fact, dominant harmony, the dominant, or fifth degree, being the connecting link between the two groups, e.g.:

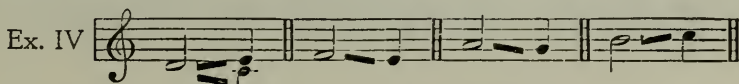


6. The active tones have a tendency to rise or fall to the tones possessing a greater feeling of rest.

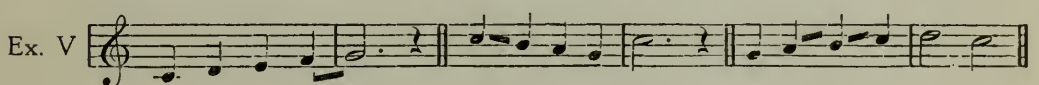
7. The resolution of the dominant harmony, as shown in the preceding chapters, will clearly illustrate the direction of these active tones, e.g.:



8. The following illustration will firmly establish in the mind of the student the tendency or natural direction of the active tones:



NOTE: These active tones may proceed in opposite direction when they occur in a scalewise passage, e.g.:

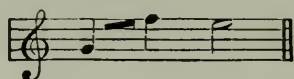


9. The student will be materially assisted in his melody writing if he observes the following instructions carefully:

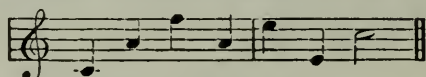
- a. Proceed by scalewise movement as much as possible, introducing occasional leaps for variety, carefully avoiding dissonant intervals such as major seventh, major and minor ninth, and all augmented intervals.
- b. Diminished intervals may be used effectively if the melody returns within the interval, e.g.:



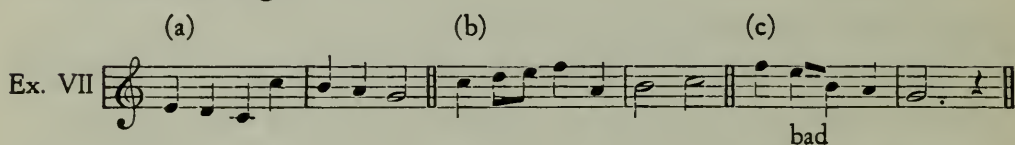
- c. The minor seventh may be used occasionally, e.g.:



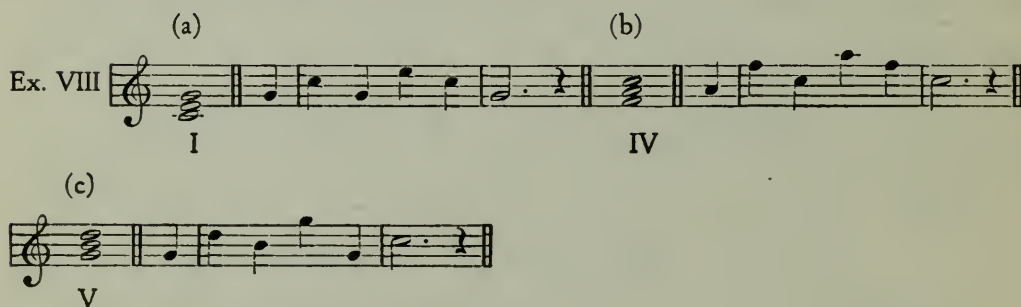
- d. Avoid a succession of wide leaps, e.g.:



However, the leap of a sixth or octave gives strength to the melody if the notes preceding and following are within the interval, e.g.:



- e. A third may be used effectively at any time. But a succession of larger leaps is permissible only when both tones imply *one* of the three primary triads, e.g.:



f. As a general rule, the tone following a wide leap should return within the interval. Exceptions to this rule are as follows:

1. When the melody proceeds in arpeggio, forming a good chord.
2. When the melody leaps to an inactive tone of the scale, i.e., I, III, or V.
3. When the melody turns in opposite direction after the note following the leap.

The following examples will clearly illustrate:

Ex. IX

(a) (b)

(c)

g. The active tones may be approached by leap from the opposite direction to which they resolve, provided they turn and follow their natural tendency, e. g.:

Ex. X

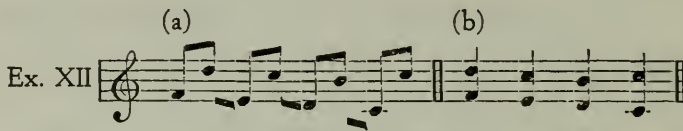
h. The leap of an augmented fourth, or tritone, should be carefully avoided in major and minor keys.

NOTE: The TRITONE may be defined as three whole tones, or

steps, forming the interval of an augmented fourth between the subdominant and leading-tone, e.g.:



- i. Wide leaps of a seventh are frequently used in instrumental music; they are justified by the fact that they are based on consecutive sixths. This may be clearly seen in the following examples:

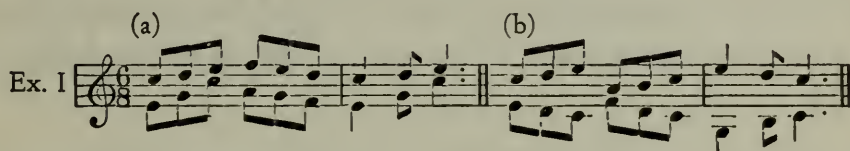


10. When objectionable intervals occur in melodic form, they are generally a reproduction of a melodic figure, or sequence, acceptable in its original position.

TWO-PART MELODY WRITING

1. The principles of writing a single melodic line having been mastered, the student's next step should be that of adding another melody above or below a given melody, i.e., two-part melody writing.

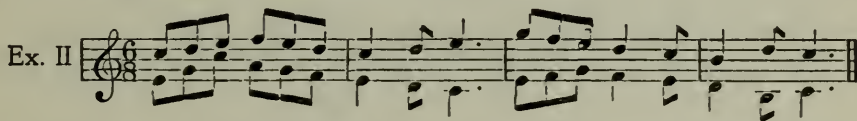
2. When writing two melodic lines in tones of equal duration, i.e., note against note, the parts may move in similar or contrary motion, e. g.:



(a) Similar motion.

(b) Contrary motion.

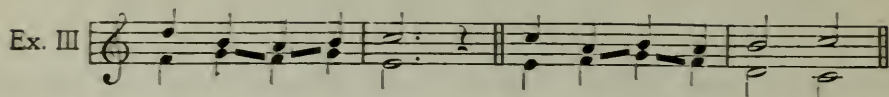
3. It will be observed that parts moving in contrary motion are stronger and produce greater independent melodic interest than those in similar motion. The best effect is obtained by a judicious use of similar and contrary motion, e.g.:



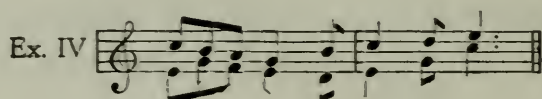
4. To obtain the best results in writing two melodic lines, the following rules should be carefully observed:

- a. Use concordant intervals between the two parts, i.e., major and minor thirds and sixths, perfect fifths, unisons, and octaves.
- b. Thirds and sixths may be used frequently provided the independence of parts is preserved by avoiding the use of more than four successive thirds or sixths in similar motion.
- c. Avoid the use of two successive thirds on the subdominant

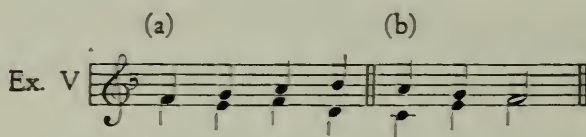
and dominant; the effect is vague and is termed by some writers the *false relation of the tritone*, e.g.:



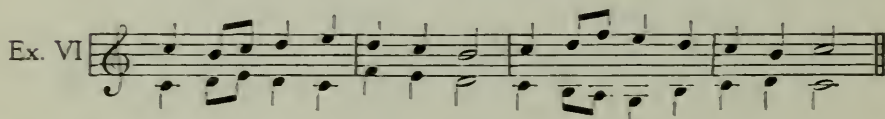
NOTE: The rough effect is greatly modified if the upper tetra-chord of the scale is used in one part, e.g.:



- d. The unison should be avoided during the course of an exercise, but may be used effectively as the initial and final tones, e.g.:



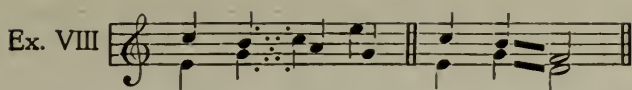
- e. The effect of an octave during the course of an exercise is weak, unless approached and quitted by step and in contrary motion, or as the initial or final tones, e.g.:



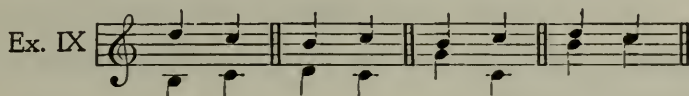
- f. The fifth should be carefully avoided on all degrees of the scale except the tonic and dominant; the empty effect of the fifth is greatly modified when the upper part moves by step, as follows:



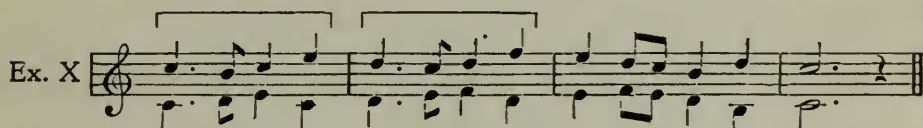
- g. Crossing and overlapping of parts should be carefully avoided, e.g.:



- h. The termination of an exercise should produce, or imply, a perfect cadence; one part should move by step from the leading-tone to the tonic, while the accompanying part proceeds from the supertonic or dominant to the tonic, e.g.:



- i. When a figure, or motif, is repeated at a different pitch, the sequence should be carefully maintained in the added melody. The following example will make this clear:

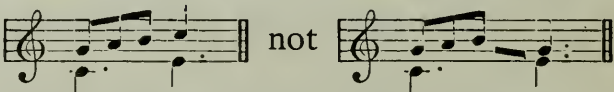
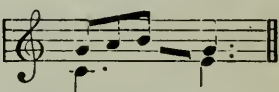


TWO-PART WRITING, FLORID MOVEMENT

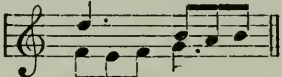

1. To create a greater degree of independence and contrast between two melodic lines, the melodies are so arranged that the tones of one part are longer in duration than those of the other, i.e., two, three, four, or more tones against one are employed, creating oblique motion in addition to the similar and contrary motion used in the previous chapter.

2. Before proceeding with the first exercises in florid part-writing, i.e., two and three notes against one, a review of the previous chapters on bye-tones, passing-tones, and auxiliary-tones will show that the following rules must be observed:

- a. Bye-tones are taken by leap from one harmony tone to another contained in the prevailing harmony.
- b. Passing-tones must be approached and quitted by step.
- c. When two passing-tones occur in succession, the second should proceed onward to the next harmony tone and should

not return, e.g.:  not 

- d. An auxiliary-tone taken *above* may be a tone or semitone, depending upon the position in the scale. An auxiliary-tone taken *below* the harmony tone is generally a semitone. But when the harmony tone to which an auxiliary-tone belongs is the 3rd of a major chord, it may be either a tone or semi-

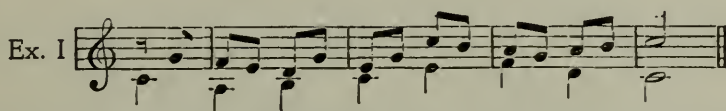
tone, e.g.:  or 

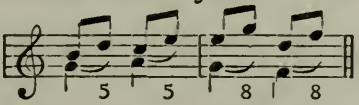
3. It will be observed that in writing two or three notes in one part against one in the other, the tones sounded simultaneously must conform to the rules of *note against note*, as given in the previous chapter, i.e., concordant intervals only are permitted. The second and third tones may be consonant or dissonant.

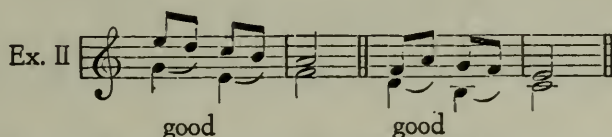
4. Tones contained in the prevailing harmony, i.e., bye-tones, may be approached and quitted by leap. All unessential tones must be approached and quitted by step.

5. The initial tone of the added part may be a perfect fifth *above* a given melody. When adding a part *below* a given melody, the initial tone may be a third, sixth, unison, or octave. The perfect fifth as an initial tone below is forbidden because the tonality becomes confused with the subdominant key.

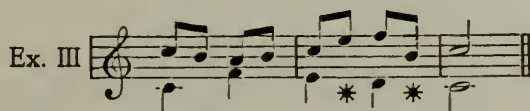
6. It will be observed that when the added part begins on the after beat, rhythmical contrast is immediately conveyed to the mind of the hearer, e.g.:



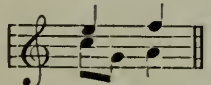
7. Consecutive octaves and fifths are objectionable between successive after beats, e.g.:  but consecutive fifths are not objectionable when they appear as passing-tones, or when the first fifth is perfect and the second diminished, e.g.:



8. A leap is better between two tones of the prevailing harmony than between the last of one group and the first of the following, e.g.:



9. Implied $\frac{6}{4}$ chords are strictly forbidden in two-part writing,

e.g.:  This forbidden progression may be easily avoided by observing the following rule:

Ex. IX

Musical notation for Example IX, measures 1-4. Treble and bass staves in B-flat major, 6/8 time. An asterisk is placed above the first measure of the treble staff, with lines pointing to the eighth notes in measures 2, 3, and 4.

Ex. X

Musical notation for Example X, measures 1-4. Treble and bass staves in B-flat major, 6/8 time.

Continuation of musical notation for Example X, measures 5-8. Treble and bass staves in B-flat major, 6/8 time.

* Note: The octaves on the after beats in Ex. VII and IX may be avoided by the use of chromatic passing-tones and auxiliary tones, e. g.:

Ex. VII

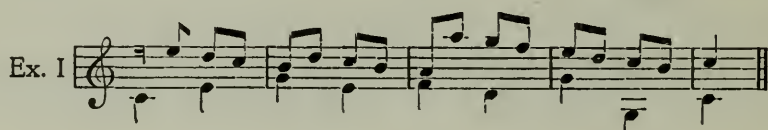
Musical notation for Example VII, measures 1-4. Treble and bass staves in D major, 3/4 time.

Ex. IX

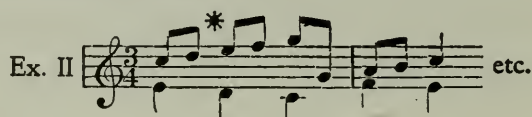
Musical notation for Example IX, measures 1-4. Treble and bass staves in B-flat major, 6/8 time.

THE APPOGGIATURA, AND CHANGING-TONE

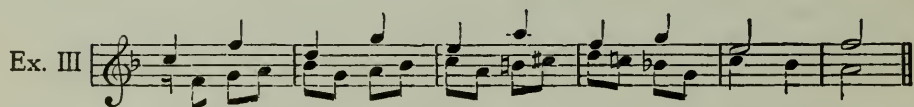
1. To maintain an uninterrupted scalewise passage in florid two-part writing, it is permissible occasionally to introduce an accented passing-tone, or appoggiatura, in which case the unessential tone is resolved on the after portion of the beat, e.g.:



2. In an ascending scalewise passage in which the appoggiatura resolves upwards, it is necessary that both parts proceed by step and in contrary motion, e.g.:



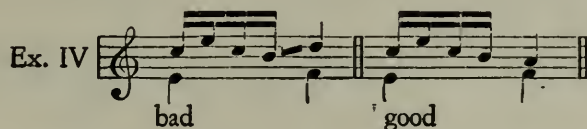
3. In two-part writing, the appoggiatura is generally more effective in the upper part. The following example will show its possibilities in the lower part:



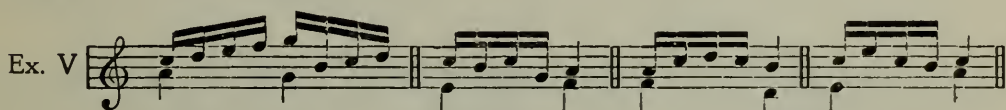
4. It will be observed that an occasional appoggiatura adds point and interest to a melodic line. It should, however, be used sparingly in two-part writing, and for the present should be approached and quitted by step. A leap to an appoggiatura is effective only in three or more parts and should be carefully avoided in two-part writing.

5. To introduce four tones in the added part against one in the given melody, the rules pertaining to tones sounded simultaneously must be carefully observed, i.e., the first tone of a group *must* be a consonant. The following three tones may be either consonant

or dissonant. The consonant tones are free to move by step or leap, the dissonants must always move by step. If a tone in the group is consonant to the given melody but dissonant to the prevailing harmony, it must be approached and quitted by step, e.g.:



6. The use of four tones against one in a given melody affords greater opportunity for free movement in scalewise progression and leaps. The best results are obtained by a judicious use of both, e.g.:

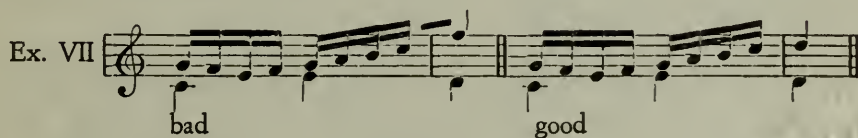


7. Implied $\frac{6}{4}$ chords, as in two notes against one, are not permissible in groups of four tones in two-part writing, e.g.:

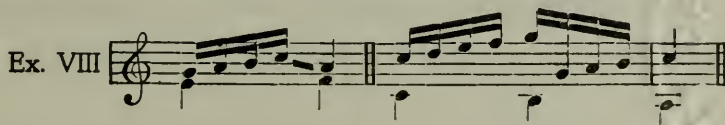


NOTE: See rule in §9, Chap. XIX.

8. A scalewise passage followed by a leap in the same direction should be carefully avoided, e.g.:

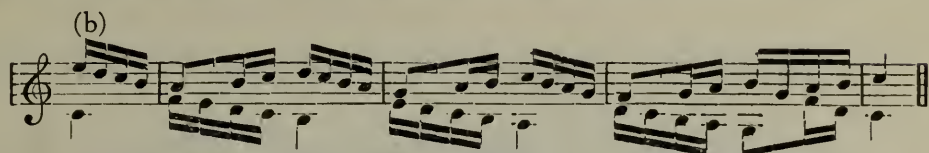


A leap in the opposite direction is good, e.g.:

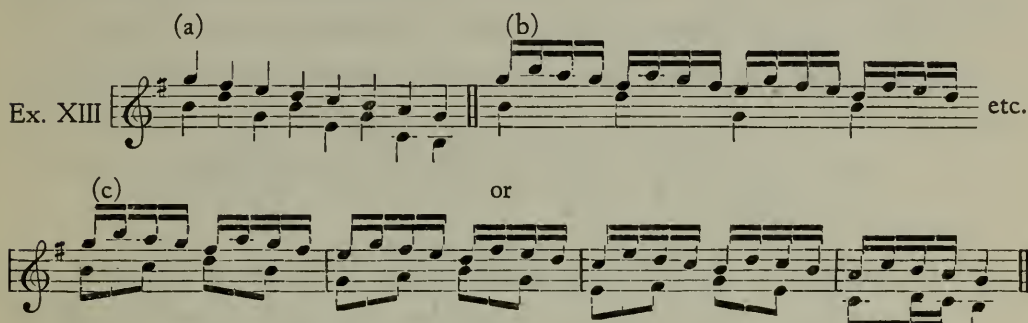


9. To maintain a rhythm of four to one, the various forms of changing-tones, the rules for which were given in a previous chapter,

This simple sequence may be decorated as follows:



14. The descending scale, harmonized in sequence, may be decorated in various ways. The following will show some of the possibilities of such treatment, e.g.:



Scalewise progressions in thirds or sixths may be treated in various figures. The following examples will clearly illustrate:



NOTE: The above examples are simply illustrations, and the figures may be changed in various ways. The student should not use the same figure too frequently; the motive should be varied so that interest and contrast are created in each melodic line.

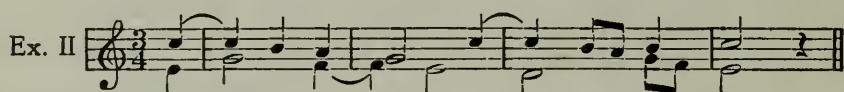
SYNCOPIATION AND SUSPENSIONS IN TWO PARTS

1. A further degree of independence and contrast in two-part melodic progression is frequently obtained by the use of the tie. This device may be used effectively in two ways:

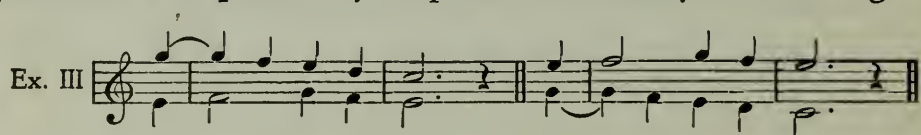
- a. To sustain a concordant tone occurring on the unaccented beat, so as to form another concord on the accented beat that follows in the same measure or the succeeding measure, e.g.:



- b. To sustain a concordant tone so as to form a discord, or suspension, which generally resolves by step downwards or by ornamental resolution, e.g.:



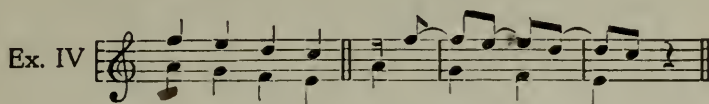
2. A review of the chapter on suspensions in four-part harmony (page 53) will materially aid the student in the study of suspensions in florid two-part writing. The rules are identical in both cases. But in two-part writing, the most effective suspensions are those resolving upon major and minor thirds and sixths. The suspended ninth in the upper part and the suspended seventh in the lower part, resolving upon an octave in both cases, may be used occasionally, provided that in each case both tones of the octave are approached and quitted by step and in contrary motion, e.g.:



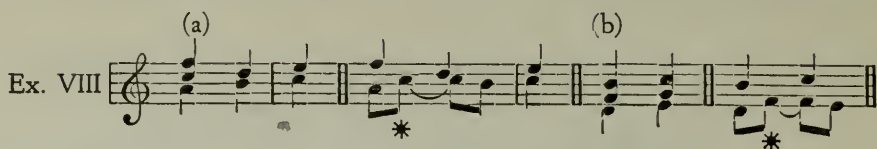
3. In a succession of thirds or sixths, suspensions may be easily introduced by tying the notes of one part so that the tones are

sounded after the tones of the accompanying part, producing the effect known as **SYNCOPIATION**, e.g.:

(a)

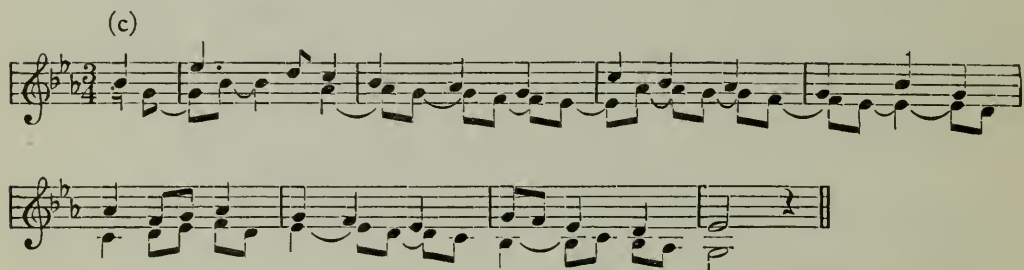
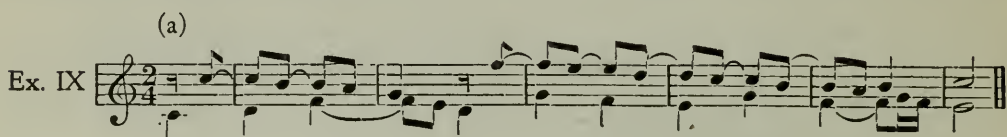


This exception is clearly illustrated in the following example:



* Implied $\frac{6}{4}$ chord.

8. The following examples will clearly illustrate the various uses of the tie and suspension:

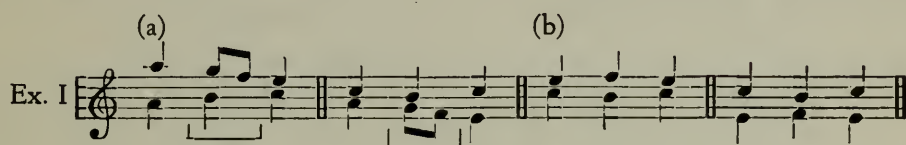


9. Constant repetition of the various decorations in the exercises is intended to familiarize the student with each particular device. Inasmuch as the objective is contrast and variety, any device used too frequently will defeat its purpose and the effect will become monotonous. In his first attempts at original composition, the average student is inclined to over-decorate. To obtain artistic results, he should remember that the various devices are used only when a certain effect is desired.

ESSENTIAL DISSONANCES IN TWO-PART WRITING

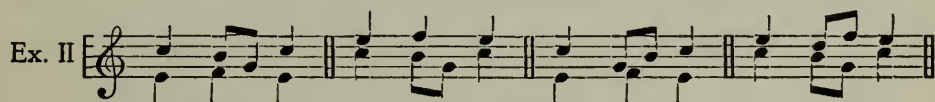
1. Implied essential dissonances, i.e., chords of the seventh, may be used occasionally in two-part writing, provided that the discord is approached and quitted by step, or introduced as a passing-tone in stepwise progression.

The following examples will clearly illustrate the use of the implied dominant seventh chord:



- (a) The dominant seventh chord is complete; the root moves to the seventh which appears as a passing-tone.
- (b) The diminished fifth and its inversion, the augmented fourth, are approached and quitted by step. These intervals imply the dominant seventh chord, or the first inversion of the diminished triad on the leading-tone, which is regarded as dominant harmony, its generator being the dominant.

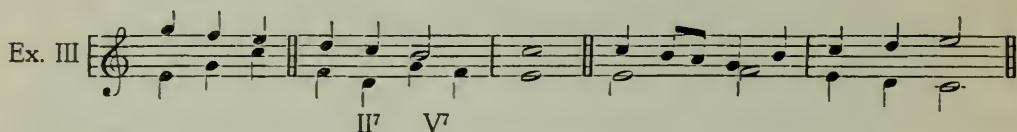
2. An ornamental resolution may be introduced occasionally. In this case the third or seventh may leap to another tone of the chord and then proceed to the tone of resolution, e.g.:



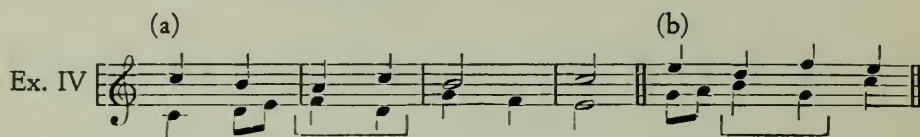
NOTE: It will be observed that all the essential tones of the dominant seventh chord are sounded. The fifth of the dominant is frequently omitted, even in four-part harmony.

3. The major second or its inversion, the minor seventh, may be

used occasionally as an unprepared essential dissonance, provided that the seventh of the chord is approached by step and resolved as a part of a chord of the seventh, i.e., the seventh of the chord must fall, e.g.:

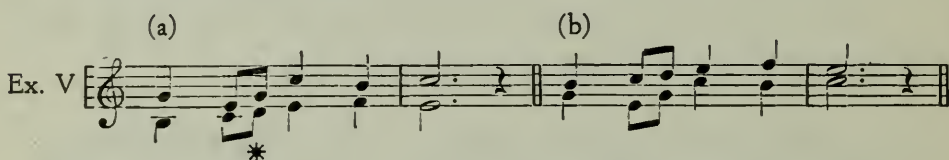


4. The interval of the seventh may be approached by leap, provided that the leap is taken from tones contained in the chord implied by the seventh, e.g.:



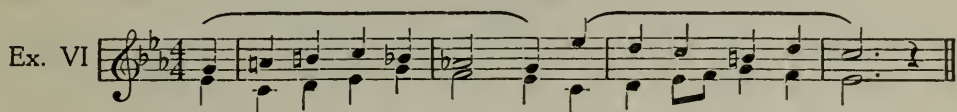
- (a) Complete chord of the supertonic seventh followed by the dominant seventh.
- (b) Complete chord of the dominant seventh by leap from within.

5. The perfect fourth, which is regarded as a dissonance, may be used if the interval is formed by an unaccented passing-tone in scalewise progression against an essential tone of a chord proceeding in arpeggio, e.g.:



- (a) *Perfect fourth in arpeggio, followed by augmented fourth which implies the dominant seventh chord.
- (b) This is an inversion of the entire example given in (a). It will be observed that in this inversion the perfect fourth becomes a perfect fifth and the augmented fourth becomes a diminished fifth.

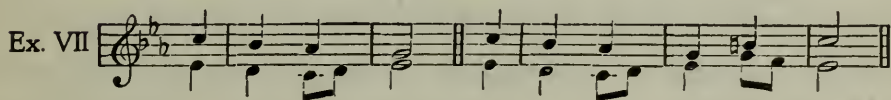
6. In minor keys the chromatically altered tones may be used as essential parts of chord formations based on the melodic form of the scale, provided, however, that thirds and sixths only are used. The altered sixth, being major, must proceed upwards to the leading tone, and the minor seventh must descend to the submediant, i.e., the minor sixth degree of the scale, e.g.:



NOTE: When the minor seventh from the tonic is used, it should be followed as soon as possible by the chromatically altered leading-tone so as to avoid the feeling of vague tonality, e.g.:

(a)

(b)



- (a) In this progression the effect strongly suggests the key of E flat; this is the relative major key.
- (b) Because the raised seventh, or leading-tone is introduced, the effect is definitely in C minor.

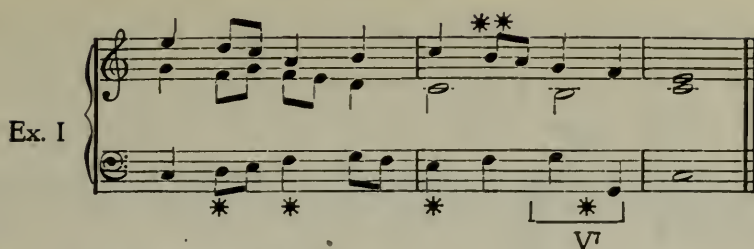
THREE-PART MELODIC WRITING

1. When the student has mastered the art of writing two melodic lines with the various devices that give flexibility and independence of melodic movement, and acquired, through the study of two-part writing, the ability to hear two parts moving simultaneously, and to think in terms of melodic lines constructed upon a foundation of sound harmonic principles instead of mere chord progressions, he will have laid the essential foundation for success in music composition and be well prepared to proceed with the study of *three-part* writing.

2. When three parts are employed, the degree of independence will vary considerably, depending upon the style or character of the music itself. It will be observed that when arpeggios or chord formations are used in piano music as accompaniment to a melody or song, the melodic line is somewhat restricted. But in trios for voices or strings the melodic line is restricted only by the technical difficulties of the particular voice or instrument.

3. In three-part melodic writing, complete harmony is possible when triads or their inversions are used. Inasmuch as the objective is a good flowing melody in each part, it frequently happens that a tone of the chord must be omitted and another doubled, in order to maintain a smooth melodic progression. It will be well to remember that melody takes precedence over harmony.

4. A careful analysis of the following example will show that, to maintain a smooth melodic line in which the parts move by diatonic, or stepwise, progression, the fifth of the chord is frequently omitted:

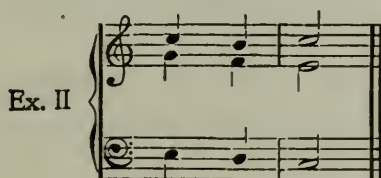


NOTE: * Fifth omitted.

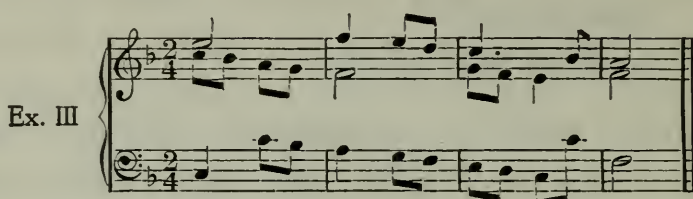
** Accented passing-tone.

5. If the third of a chord is omitted, the tonality is vague. It is best, therefore, to omit the fifth and double another tone of the chord. To attain the best results in harmonic structure, the following rules should be carefully observed:

- a. The third of a chord should not be omitted.
 - b. When the fifth of a major triad is omitted, double the root.
 - c. When the fifth of a minor triad is omitted, double either the root or the third. This choice is determined by the color desired and by the need of maintaining a smooth melodic progression.
 - d. The bass of a major triad in first inversion should not be doubled.
 - e. The bass of a minor triad in first inversion may be doubled effectively.
 - f. The diminished triad is forbidden in root position. It may, however, be effectively used in first inversion, provided that, when the third is omitted, the bass is doubled—not the leading-tone.
 - g. The root of the dominant seventh chord should not be omitted in first or third inversion.
6. The implied dominant seventh chord with root omitted may be effectively used in a cadence, e.g.:



7. The melodic lines should be so arranged that the harmonic structure will be, as a general rule, equidistant. The distance between the upper parts may exceed that of the lower, however, when an occasional leap is necessary to maintain a better melodic progression, e.g.:



8. In his first attempts at melody writing in three parts, the student should use, for the most part, diatonic harmonies, i.e., triads and chords of the dominant seventh in root and inverted positions. Conjunct movement is most desirable and an occasional accented passing-tone may be introduced, particularly if a smooth progression is thereby preserved and awkward skips are avoided. The parts should be independent in character and varied by rhythmic figures which may be produced by the use of passing-tones, bye-tones, and the tie.

9. In introducing unessential dissonances between two moving parts, the following rules should be carefully observed:

a. An accented passing-tone, creating a dissonance between two moving parts, may be used, provided that:

1. Both parts approach and quit the dissonance by step and in contrary motion, e.g.:



2. The slower part moves by arpeggio, and the dissonant tone of the more quickly moving part is approached and

quitted by step. In this case the parts may move in similar or contrary motion, e.g.:

Ex. V

NOTE: A succession of dissonances between two moving parts should be carefully avoided, e.g.:

Ex. VI

good bad

b. A tie from a passing-tone should be carefully avoided, e.g.:

Ex. VII

good bad

10. A careful study of the following examples will show that in each case (a) is rhythmically uninteresting and monotonous, though harmonically correct. But by "decorating" these chord progressions with the various devices spoken of in the preceding chapters, we create three melodic parts that move along smoothly, with independence and varied rhythmic interest.

(a)

Ex. VIII

Example VIII (a) is a short musical exercise in 2/4 time. The treble staff begins with a half note G4, followed by quarter notes A4, B4, C5, B4, A4, G4, and a half note F#4. The bass staff consists of a single line of half notes: G2, A2, B2, C3, D3, E3, F3, and G3.

(b)

Example VIII (b) continues the exercise in 2/4 time. The treble staff has quarter notes G4, A4, B4, C5, followed by eighth notes D5, E5, F#5, G5, then quarter notes F#4, E4, D4, and a half note C4. The bass staff continues with half notes: G2, A2, B2, C3, D3, E3, F3, and G3.

(a)

Ex. IX

Example IX (a) is a short musical exercise in 2/4 time. The treble staff begins with a half note G4, followed by quarter notes A4, B4, C5, B4, A4, G4, and a half note F#4. The bass staff consists of a single line of half notes: G2, A2, B2, C3, D3, E3, F3, and G3.

(b)

Example IX (b) continues the exercise in 2/4 time. The treble staff has quarter notes G4, A4, B4, C5, followed by eighth notes D5, E5, F#5, G5, then quarter notes F#4, E4, D4, and a half note C4. The bass staff continues with half notes: G2, A2, B2, C3, D3, E3, F3, and G3.

(a)

Ex. X

Example X (a) is a short musical exercise in 2/4 time, key of B-flat major. The treble staff begins with a half note G4, followed by quarter notes A4, B4, C5, B4, A4, G4, and a half note F#4. The bass staff consists of a single line of half notes: G2, A2, B2, C3, D3, E3, F3, and G3.

(b)

Example X (b) continues the exercise in 2/4 time, key of B-flat major. The treble staff has quarter notes G4, A4, B4, C5, followed by eighth notes D5, E5, F#5, G5, then quarter notes F#4, E4, D4, and a half note C4. The bass staff continues with half notes: G2, A2, B2, C3, D3, E3, F3, and G3.

This block shows the beginning of a musical exercise in 2/4 time, key of B-flat major. The treble staff has quarter notes G4, A4, B4, C5, followed by eighth notes D5, E5, F#5, G5, then quarter notes F#4, E4, D4, and a half note C4. The bass staff continues with half notes: G2, A2, B2, C3, D3, E3, F3, and G3.

11. In practical composition, the phrases or musical figures are more effective when they begin on an unaccented tone and conclude upon an accent. It will be observed that the use of occasional rests in the various parts will add clarity, or point, to the figures and lighten the general effect. This may be clearly seen in the following, which is another arrangement of Example X:

(c)



12. Having thoroughly studied this chapter, the student may proceed with the exercises for three-part writing, following the order given in the Workbook. The objective in these exercises is to cultivate an aural perception, i.e., the student should listen so that he may learn to hear the music that he reads on the written page and not depend upon a rule to fit each particular case. The given rules should, however, form the basis of his experiments in the development of artistic writing.

FOUR-PART MELODIC WRITING

1. The principal difficulty in maintaining independence of melodic line in four-part writing is due to the tendency to overcrowd the parts with harmonic structure. In fact, it is practically impossible for four parts to move simultaneously without producing a feeling of heaviness or the effect of rapid-changing harmony in which the contrapuntal style is completely lost in a succession of chords.

2. To prevent this feeling of heaviness or crowded effect, the parts should move in tones of varied duration; the principal theme, or line of chief melodic interest, should be judiciously passed from part to part; and rests should be frequently introduced so as to add interest and point to the melodic line and lighten the general effect.

By the use of the various devices now familiar to the student, a simple harmonic progression may be decorated as follows:

Ex. I

(a)

(b)

3. The following is an excerpt from a simple organ prelude arranged in four parts for strings:

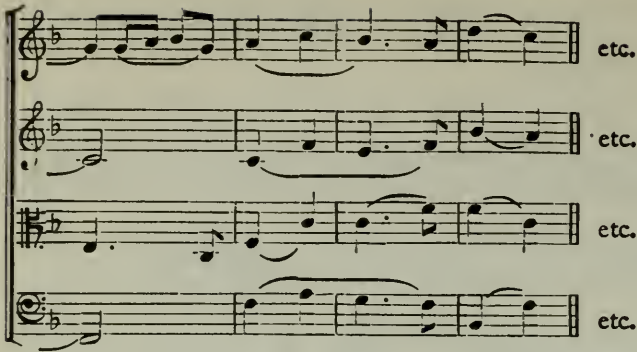
Merkei

Ex. II

4. In four-part writing, the degree of independence will vary considerably, depending upon the style of the music itself. In orchestral combinations, one or more parts are frequently used as principal melodies against an accompaniment which is subordinate and contrasted in rhythmic figure and design so as to provide the harmonic background and add prominence to the principal subject:

Ex. III

Beethoven



5. In part songs, the character of the music depends upon the text. The following examples will clearly show the movement of parts to create individuality and independence of melodic lines:

Ex. IV (a)

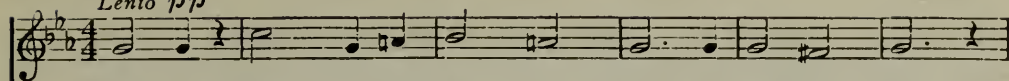
Edward Elgar

That God, that God at their foun-tains, their foun-tains
 That God that God at their foun-tains, Far off .. has been
 That God, that God at their foun-tains, Far off .. has been *pp*
 Far

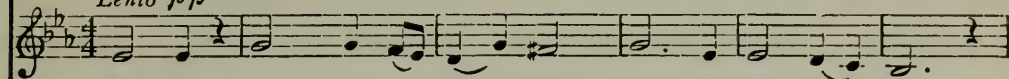
pp etc.
 Far off, far off has been rain - ing . . .
pp etc.
 rain - ing, far off, far off has been rain - ing . . .
pp etc.
 rain - ing, far off, .. far .. off has been rain - ing . . .
pp etc.
 off, far off, far off, has been rain - ing . . .

(b)

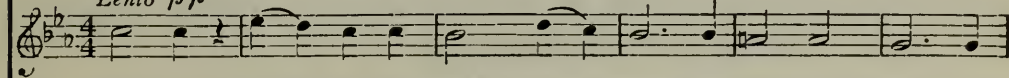
R.G.J.

Lento pp

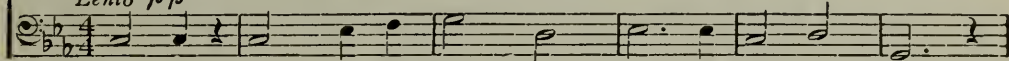
Bless - ed, bless - ed are they that mourn, are they that mourn,

Lento pp

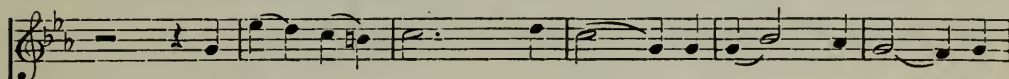
Bless - ed, bless - ed are they that mourn, are they that mourn,

Lento pp

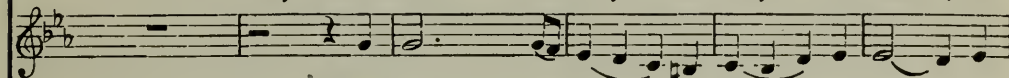
Bless - ed, bless - ed are they that mourn, are they that mourn, are

Lento pp

Bless - ed, bless - ed are they that mourn, are they that mourn



are they that mourn, are they are they that mourn, are



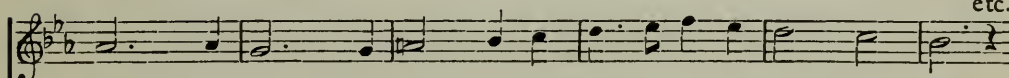
Bless - ed are they, are they that mourn, are



They that mourn, Bless - ed are they, are they that mourn, are

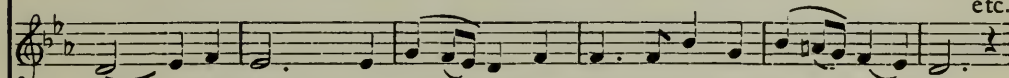


Bless - ed are they that mourn, are they that mourn, are



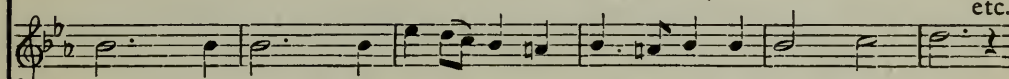
They that mourn for they shall be com-fort-ed, be com - fort - ed

etc.



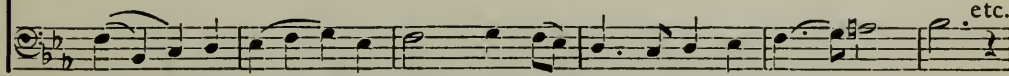
They that mourn for they..shall be com-fort-ed, be com - fort - ed

etc.



They that mourn for they shall be com-fort-ed, be com - fort - ed

etc.



They .. that mourn for they shall be com-fort-ed be com - fort - ed

etc.

6. It will be observed that, in contrast to orchestral combinations, the melodic line is not broken up as frequently in part songs because the text generally demands a certain feeling of continuity. A contrapuntal effect in this style of writing is difficult to maintain. It requires a considerable amount of experience and skill that can be acquired only by careful study of the works of the masters, and diligent practice in adding three florid parts to a given subject in the form of a chorale or a florid melody.

7. In the example below, the principal theme is announced by the sopranos and then passed on to the tenors in the four-part treatment that follows. It is again repeated as a solo in the organ accompaniment, in which the harmonic background together with the voice parts produces the effect of a drone bass.

Ex. V

R. G. J.

Pastorale grazioso

There were shep-herds a-bid-ing in the field, keep-ing watch o'er their flock by

night, keep-ing watch, watch, keep-ing

There were shep-herds a - bid - ing in the field, keep-ing

There were shep-herds a - bid - ing in the field, keep-ing

Keep-ing watch in the field, keep-ing

watch o'er their flock by night, . . keep-ing watch o'er their flock by night, keep-ing

watch o'er their flock by night, . . keep-ing watch o'er their flock by night, keep-ing

watch o'er their flock by night, . . keep-ing watch o'er their flock by night, keep-ing

watch by night, . . keep-ing watch o'er their flock by night, keep-ing

The image displays a musical score for a chorale by J. S. Bach. It consists of four vocal staves (Soprano, Alto, Tenor, and Bass) and a piano accompaniment. The vocal parts are in G major (one sharp) and 4/4 time. The lyrics for the vocal parts are: "watch ov - er their flock by night". The piano accompaniment is in the same key and time, featuring a steady eighth-note pattern in the right hand and a more complex harmonic structure in the left hand. The score is marked with "etc." at the end of each line, indicating it is a continuous piece.

8. The following well-known chorale by J. S. Bach is an outstanding example of contrapuntal treatment. A careful study of this exquisite masterpiece will materially aid the student in this style of writing.

Jesu, Priceless Treasure

Ex. VI

J. S. Bach

Je - su, price-less treas-ure, source of pur - est pleas-ure, Tru - est friend to me,
Ah, how long I've pant-ed, And my heart hath faint-ed, Thirst-ing, Lord, for Thee!

Je - su, price-less treas-ure, source of pur - est pleas-ure, Tru - est friend to me,
Ah, how long I've pant-ed, and my heart hath faint-ed, Thirst-ing, Lord, for Thee!

Je - su, price-less treas-ure, source of pur - est pleas-ure, Tru - est friend to me,
Ah, how long I've pant-ed, and my heart hath faint-ed, Thirst-ing, Lord, for Thee!

Je - su, price-less treas-ure, source of pur - est pleas-ure, Tru - est friend to me,
Ah, how long I've pant-ed, and my heart hath faint-ed, Thirst-ing, Lord, for Thee!

Thine I am, O spot-less Lamb! I will suf-fer naught to hide Thee, Naught I ask be-side Thee.

Thine I am, O spot-less Lamb! I will suf-fer naught to hide Thee, Naught I ask be-side Thee.

Thine I am, O spot-less Lamb! I will suf-fer naught to hide Thee, Naught I ask be-side Thee.

Thine I am, O spot-less Lamb! I will suf-fer naught to hide Thee, Naught I ask be-side Thee.

9. Before proceeding with the exercises in the Workbook, the student should study the following directions carefully:

- A rhythmic figure or pattern appearing in the initial phrase should be frequently repeated in the various parts so as to produce a feeling of unity.
- When a phrase begins with an anacrusis, i.e., an unaccented

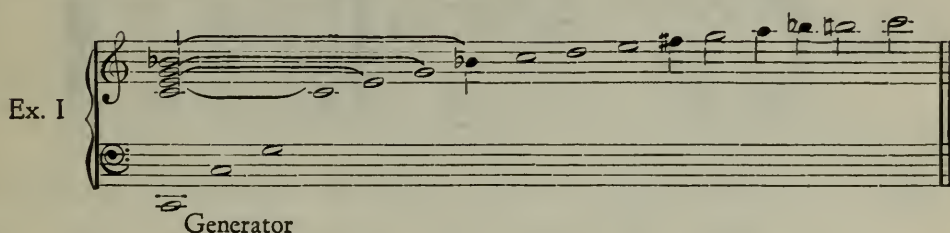
tone or group of tones preceding the first metrical accent, it is best not to harmonize it or the first accented tone, but to bring in the added part or parts at an appropriate unaccented beat in the subsequent measure, so as to produce the effect of imitation, e.g.:



- c. The use of rests before a rhythmic figure is introduced will always add clarity to the part writing and prevent the feeling of heaviness or overcrowded harmonic effect.

SECONDARY SEVENTHS AND THEIR RESOLUTIONS

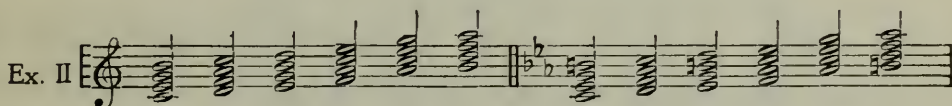
1. It will be observed that the tones of the dominant seventh chord correspond to those of the fundamental tone and its lower and most audible harmonics, e.g.:



Thus nature has familiarized our ears with the sound of the fundamental seventh. This accounts for the striking effect of the secondary sevenths that are artificially constructed. The fundamental seventh is frequently referred to as the chord of nature.

2. It is interesting to note that when a generator, or fundamental tone, is allowed to vibrate in a normal manner the true harmonics are actually heard, diminishing in accordance with their distance from the generator. But when the above sounds are played on a piano which is tuned to the well-tempered scale, there is a slight variance from the actual sounds of the chord of nature, especially those which are written in quarter notes in the above example.

3. The secondary sevenths are formed by adding another third above the other triads of a major or minor scale, e.g.:



4. The above chords should be played on the piano and their particular character and varying degrees of harshness noted and memorized. It will be observed that those chords containing a minor third and minor seventh from the root possess a milder dissonance than the others.

5. The secondary sevenths were first introduced in the seventeenth century in the form of an ornamental resolution of the 7-6 suspension; i.e., the dissonant seventh proceeded to its tone of resolution at the same time that the bass moved up a fourth or down a fifth, e.g.:

Ex. III

NOTE: It will readily be seen that the supertonic seventh in (c) above is undoubtedly a development of the ornamental resolution of the 7-6 suspension (a).

6. Modern composers frequently introduce the dissonant seventh without preparation, generally depending upon the voice leading and the particular effect desired. This is particularly true with regard to the leading-tone seventh, in which case the seventh from the root may enter by suspension from the preceding chord, by step or by leap, e.g.:

Ex. IV

7. The regular resolution of the leading-tone seventh upon the tonic triad is due to the strong tendency of its root to ascend to the tonic. When the seventh from the root appears in the soprano voice, forbidden consecutive fifths may be avoided by careful observance of the following rules:

- a. The fifth and seventh from the root must descend one diatonic step.

- b. The third from the root may ascend one diatonic tone or leap downwards to the fifth of the chord of resolution.

NOTE: When the third ascends, it will be necessary to double the major third of the chord of resolution.

The following examples will make this clear:

Ex. V

(a)

(b)

(c)

7 7 7 7 bad 7 7

7 7

8. An irregular resolution of the leading-tone seventh is sometimes very effective, especially to an inversion of the dominant seventh chord, in which case the root, instead of rising a step to the tonic, leaps to another degree of the scale, e.g.:

Ex. VI

(a)

(b)

7 4 7 4

3 2

9. The second inversion may be used effectively as a leading-tone seventh chord. The other inversions are only used as passing chords, in which case they lose their identity, e.g.:

Ex. VII

(a) (b)

4
3

*

10. It is interesting to note that some writers regard the leading-tone seventh, resolving upon tonic harmony, as an inverted dominant major ninth with the root omitted. This is due to the fact that secondary sevenths generally resolve upon a tone a fourth above or a fifth below in the diatonic scale, e.g.:

Ex. VIII

NOTE: In the above example, the chord is resolved as a secondary seventh. Its resolution to the tonic triad is identical with the regular resolution of the dominant major ninth. This will be readily recognized in the treatment of these chords in the ensuing chapters.

11. The seventh may be left unresolved if it remains in the same part and becomes an essential tone of the next chord, e.g.:

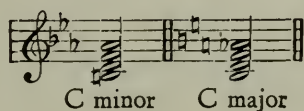
Ex. IX

7

12. In four-part writing, the doubling or omitting of any tone of the leading-tone seventh or its inversions is strictly forbidden.

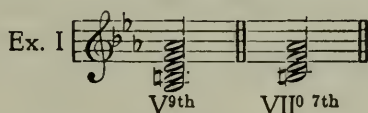
SECONDARY SEVENTHS AND THEIR RESOLUTIONS (continued)

1. By adding another third to the triad on the leading-tone of a minor key, we have what is commonly known as the chord of the DIMINISHED SEVENTH, generally considered the most ambiguous of all chords.
2. The diminished seventh chord figured VII^07 consists of a root, minor third, diminished fifth, and diminished seventh. This chord may be used in both major and minor keys:



It will be observed that a chromatic alteration is always necessary, the seventh of the chord is always lowered a semitone in the major key, and the root raised a semitone in the minor.

NOTE: Because of its regular resolution to the tonic triad, this chord is often regarded as an inversion of the dominant minor ninth with root omitted, e.g.:



3. The combination of the fourth and seventh degrees of a scale in any chord invariably implies a derivation from the dominant root. In fact, all diatonic discords in every key—i.e., sevenths, ninths, elevenths, and thirteenth—are generated from the dominant. When the dominant is present in one of the upper parts, the chord is considered to be in inversion. But if the lowest tone or tones are absent, we have a derivative of the fundamental discord, and the lowest tone present becomes the root, e.g.:

Ex. II

Leading-tone 7th
V 9th

Supertonic 7th
Leading-tone 7th
V 11th

Subdominant 7th
Supertonic 7th
Leading-tone 7th
V 13th

NOTE: By adding the minor key signature to the above, we have the diminished seventh and other sevenths in the minor key, e.g.:

Dim 7th
V 9th

4. With our well-tempered scale, the aural effect of a diminished seventh in root position is identical with that of the inverted positions of diminished sevenths belonging to different keys. In the following example the diminished seventh of C in root position is enharmonically changed to an inverted diminished seventh in E flat minor, A minor, F sharp minor, and D sharp minor, respectively:

Ex. III

7
C minor

6
4
2
E flat minor

6
5
3
A minor

6
4
3
F sharp minor

6
4
2
D sharp minor

5. The inversions may also be changed enharmonically to root and inverted positions of other diminished sevenths, as may be readily seen in the following example:

Ex. IV (a) (b) (c)

7 6 7 6 7 6 7

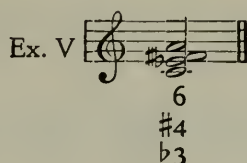
5 4 5 4 5 5 6

3 3 3 2 3 3 3

C Minor Eb Minor C Minor Eb Minor C Minor Eb Minor F# Minor A Minor

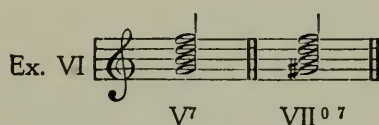
NOTE: It is obvious that the student should exercise great care in the correct notation of this chord so that the key may be easily identified.

6. To find the key of an inverted diminished seventh, count the numerical description of the intervals from the bass; the lowest even number will be the root of the chord, e.g.:



In this case the lowest even number is the 4th from the bass. Therefore, F sharp, the leading-tone of G major or minor, depending on the key signature, is the root.

7. A dominant seventh chord may be changed to a chord of the diminished seventh by chromatically raising the root one semitone, e.g.:



8. By the use of this chord an easy and effective means of modulation to related and unrelated keys is possible. The following example will show that, by means of the harmonic chromatic scale, it is possible to write the diminished seventh chords and their inversions—twelve in all—in the key of the tonic, dominant, and subdominant, and each will have its correct notation:

Ex. VII

6	b6	6	6	b7	b6	b7	b6	6	#6	6	b7	b6
#4	4	b5	b4	b5	b4	5	b5	b4	b5	b4	5	#4
b3	b2	3	#2	3	b3	b3	b3	b2	3	b3	b3	b3
Key G	F	C	G	F	C	G	F	C	G	F	C	G

It will be observed that each part follows the notation of the harmonic form of the chromatic scale in the key of C, from its particular starting point to its octave. Inasmuch as each of these chords may also be written in different ways enharmonically as in

Examples III and IV, it is obvious that modulation to any key is possible by means of this chord.

9. The seventh of a diminished chord may be approached by step or by leap, or be sustained from the preceding chord:

Ex. VIII

(a) (b) (c)

7 7 7

10. The rules for the resolution of the diminished seventh chord upon the tonic triad are as follows:

- a. The root rises to the tonic.
- b. The seventh falls to the dominant.
- c. The third rises to the mediant or falls a fifth.
- d. The fifth falls to the mediant.

Ex. IX

(a) (b) (c) (d)

7 7 b7 b7

NOTE: The third of the major chord is doubled in (c). The following progression with consecutive fifths between the outside parts is strictly forbidden:

Ex. X

5ths

6
b5

11. The inversions may resolve upon the inverted tonic triad or the dominant seventh chord in root position as follows:

Ex. XI

(a) (b) (c)

6/5 6/4 6/4 6/3 6/2 V7

12. A diminished seventh chord in root or inverted position may also be approached and quitted as follows:

- By a dominant seventh chord in root or inverted position.
- By another diminished seventh chord in root or inverted position.
- By a secondary chord of the seventh in inverted position only.

13. When a diminished seventh is employed in modulation, the progression will sometimes produce *false relation*; this, however, is not objectionable, provided that a good melodic line is maintained, e.g.:

Ex. XII

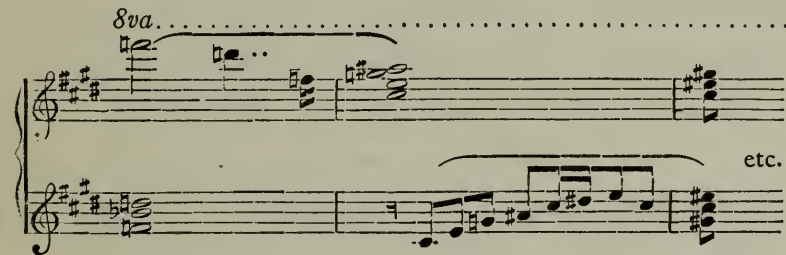

7 7

NOTE: False relation may be defined as follows:

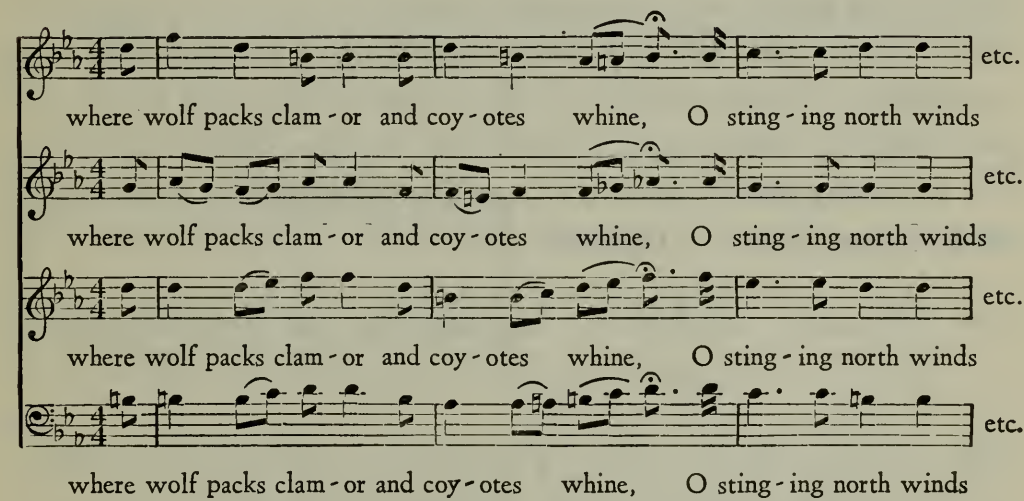
When a tone of one chord appears in another chord, in a different part, chromatically altered, and so soon as to create the effect of vague tonality, we have what is known as false relation. This was strictly forbidden by earlier writers. It is, however, often used by modern composers when a good melodic line is maintained and the general effect is not too harsh.

Wagner

Ex. XV



R. G. J.



15. When writing the exercises in the Workbook, the student should carefully observe the following rule:
In four-part writing, the doubling or omitting of any tone of the diminished seventh chord or its inversions is strictly forbidden.

SECONDARY SEVENTHS AND THEIR RESOLUTIONS
(Continued)

1. The original strict treatment of secondary sevenths in regard to their preparation and resolution has been greatly modified by modern composers. In fact, any essential discord may be introduced with or without preparation, depending upon the voice leading and the effect desired.
2. It will be observed that those containing the interval of a minor seventh from the root—i.e., the II⁷, III⁷, and VI⁷—are to a marked degree less harsh than the I⁷ and IV⁷ which contain the interval of a major seventh between the root and the seventh. The extreme dissonance of these major sevenths, however, produces very interesting results when introduced and resolved effectively.
3. When any of the above sevenths are sounded alone, the aural effect is rather harsh. But when one of the dissonant tones, i.e., either the root or the seventh, is prepared or taken by step and resolved, the general effect is quite agreeable.
4. There are no definite rules regarding the approach of a secondary seventh chord. The student should be guided by his own good judgment and a good melodic line to attain the desired effect. The following hints, however, may prove helpful in working out the exercises in the Workbook:
 - a. The root, sounded as a consonant in the preceding chord, may be prolonged in the same part while the seventh enters by step.
 - b. The seventh, sounded as a consonant in the preceding chord, may be prolonged in the same part, while the root enters by step.
 - c. The seventh or root may enter by step or leap if a good melodic line is maintained.

5. In the normal resolution the following rules are generally observed:

- a. The seventh falls one degree.
- b. The fifth generally falls one degree.
- c. The third generally falls one degree, or it may be prolonged to the next chord if that chord is another secondary seventh.
- d. The root rises a fourth or falls a fifth.
- e. The root may be doubled, but a doubled seventh is strictly forbidden.

6. The supertonic seventh is more frequently used than the other secondary sevenths. It is called by some writers the dominant of the dominant, and is very effectively used before the dominant seventh, particularly in a cadence. In the following examples the supertonic seventh and its inversions resolve upon dominant and tonic harmony:

Ex. I

The examples are arranged in two rows. The top row contains (a), (b), and (c), each showing a supertonic seventh (II⁷) resolving to a dominant seventh (V⁷). The bottom row contains (d) and (e), each showing a supertonic seventh (II⁷) resolving to a tonic chord (I). In all cases, the supertonic seventh is in root position. The resolutions follow the standard voice-leading rules: the seventh falls one degree, the fifth falls one degree, and the third falls one degree or is prolonged.

NOTE: It will be observed that in the majority of cases the seventh of the supertonic is prolonged to the root of the tonic chord upon which it resolves.

7. The mediant and submediant sevenths in root and inverted positions are resolved as follows:

Ex. II

(a) (b)

(c) (d) (e) (f)

III⁷ III⁷ VI⁷ VI⁷ VI⁷ VI⁷

8. The tonic and subdominant seventh chords which contain the interval of a major seventh from the root are resolved as follows:

Ex. III

(a) (b) (c) (d)

I⁷ I⁷ IV⁷ IV⁷

9. It will be observed that the subdominant seventh is not resolved upon a chord a fourth above or a fifth below, because the leading tone of the scale cannot be doubled. This resolution is permissible only in a sequence, provided the pattern, or original progression, is correct. The following example will make this clear:

Ex. IV

V⁷ IV⁷ III⁷ II⁷

10. Secondary sevenths may be used in succession, provided, however, that the fifth is omitted and the root doubled in every alter-

nate chord. The effect obtained in such a progression is exceptionally strong, as may be seen from the following example:

Ex. V

II⁷ V⁷ I⁷ IV⁷ VII⁷ III⁷ VI⁷ II⁷ V⁷

11. Secondary sevenths may be preceded and followed either by a chord of the dominant seventh, a chord of the diminished seventh, or by another secondary seventh in root or inverted position, respectively.

12. The variable upper tetrachord of the melodic minor scale with its inflected tones, i.e., the major sixth or major seventh from the tonic, increases the number of available secondary sevenths in the minor key. When the inflected tone occurs in a secondary seventh chord, it should form a part of an ascending or descending scale passage between the dominant and tonic. A careful study of the following examples will clearly show the ascending and descending upper tetrachord of the melodic minor scale:

Ex. VI

(a) (b) (c) (d)

II⁷₅ IV⁶_{4/2} V^{b6}₅ VI⁶₅

(e)

III⁶₅

13. In minor keys, the usual resolution of secondary sevenths upon a fourth above or a fifth below is somewhat restricted because of the augmented intervals involved. It will be observed that the I^7 and IV^7 are practically useless when resolved in this way. But the II^7 , III^7 , and VI^7 are very effective, as may readily be seen from the following examples:

Ex. VII

(a) (b) (c) (d) (e) (f)

I^7 bad II^7 III^7 IV^7 bad VI^7 VI^7 IV^7

14. The rule regarding the omitting and doubling of a tone in the leading-tone sevenths is modified in the treatment of seventh chords on other degrees of the scale. In fact, the supertonic seventh frequently enters with the fifth omitted and the root doubled, particularly if the voice leading is improved thereby. In this case the following irregular resolutions may be employed with pleasing effect:

- a. The seventh may be prolonged while the other parts move to the nearest tone in the succeeding chord.
- b. The seventh may ascend one step while the other parts move to the nearest tone in the succeeding chord.
- c. The root may be prolonged while the other voices move to the nearest tone in the succeeding chord.
- d. The root may ascend to a tone other than a fourth above while the other parts move so as to preserve the best melodic line.

These irregular resolutions are clearly illustrated in the following examples:

Ex. VIII

(a) (b)

(c) (d)

II⁷ II⁷ II⁷ II⁷

15. The importance of secondary sevenths in the development of the musical art cannot be overestimated. The following extract fully illustrates how effectively they may be used in succession:

Ex. IX

"Silent Strings," Granville Bantock

Si - lent strings, Long have you mu-ted lain, strings of my

heart, Un - touched by joy or pain un - touched by

joy or pain Si - lent strings.

etc.

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CHROMATICALLY ALTERED CHORDS

1. The chromatic alteration of one or more tones of certain diatonic chords is the outcome of the use of chromatic passing-tones and appoggiaturas.
2. Like most harmonic effects, the chromatically altered chord is made by substituting an unessential tone for a harmony tone it was originally intended to decorate.
3. A careful study of the following example will show that the chromatically altered tone decorates the fifth of the tonic chord:



By substituting the chromatically altered passing-tone for the original tone of the chord, we form an augmented triad on the tonic of the key:



NOTE: The aural effect of the augmented triad in Ex. II is more striking than the passing-tone in Ex. I.

4. It will be observed that chromatically altered chords are more frequently used in major keys than in minor keys, and that the original diatonic tone may be either lowered or raised semitonically. The most frequently used chromatically altered chords in major keys are as follows:

- a. Tonic and dominant triads with raised fifth in root and inverted position:

Ex. III

(a) (b)

$I^{\sharp 5}$ $V^{\sharp 5}_6$

Detailed description: This example consists of two parts, (a) and (b), each shown in a grand staff (treble and bass clefs). Part (a) illustrates the tonic triad with a raised fifth, labeled $I^{\sharp 5}$. The notes are G4, B4, and D5 in the treble, and C4, E4, and F4 in the bass. Part (b) illustrates the dominant triad with a raised fifth, labeled $V^{\sharp 5}_6$. The notes are B4, D5, and F5 in the treble, and G4, B4, and C5 in the bass. Both parts are in 4/4 time and end with a double bar line.

- b. Dominant seventh with raised fifth, in root and inverted positions:

Ex. IV

etc.

$V^{\sharp 5}_3$

Detailed description: This example is in 4/4 time and shows the dominant seventh with a raised fifth in root and inverted positions. The notation includes a treble staff and a bass staff. The treble staff shows the notes B4, D5, F5, and G5, with the word "etc." following. The bass staff shows the notes G4, B4, C5, and D5. The chord is labeled $V^{\sharp 5}_3$ below the bass staff.

NOTE: The raised fifth in the dominant seventh chord should always be placed above the seventh.

- c. The subdominant triad with lowered third, in root or inverted position:

Ex. V

Detailed description: This example is in 4/4 time and shows the subdominant triad with a lowered third in root and inverted positions. The notation includes a treble staff and a bass staff. The treble staff shows the notes C4, E4, and G4. The bass staff shows the notes F3, A3, and C4. The chord is labeled Ex. V to its left.

- d. The supertonic triad and supertonic seventh, with lowered fifth in root or inverted position:

Ex. VI

(a) (b) (c)

6 II \flat 7 II \flat 5 6 5 II \flat

NOTE: The chords in (a) and (b) are identical with chords on the corresponding degrees of the tonic minor key. The diminished triad on the supertonic, like the leading-tone triad, is used in first inversion only.

5. The triad on the supertonic of the minor key with lowered root is generally taken in first inversion. This chord, consisting of the subdominant and its minor third and minor sixth, may also be used in major keys, in which case the sixth and third are chromatically lowered. This chord is known as the "Neapolitan sixth" and is generally followed by dominant or inverted tonic harmony. The following example will fully illustrate:

Ex. VII


(a) (b) (c) (d)

\flat 6 8 7 \flat 6 6 \flat 6 8 7 \flat 6 6
3 3 3 4 \flat 3

NOTE: It will be observed that the bass-tone of this $\frac{6}{3}$ -major chord may be doubled effectively.

6. The triad on the submediant in the major key is very effectively used with lowered root and fifth, respectively. This altered chord is identical with the chord on the corresponding degree of the tonic minor key.

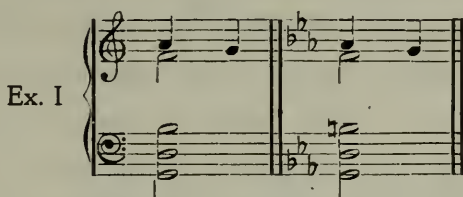
Ex. VIII



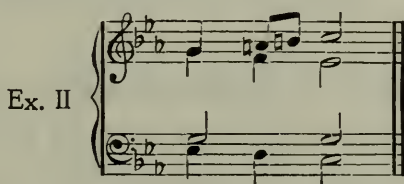
$\flat 5$
VI

CHORDS OF THE NINTH

1. A review of Chap. XV on appoggiaturas will show that an accented passing-tone above the dominant seventh chord, forming a ninth above the dominant root, will produce what is generally known as the chord of the dominant ninth, e.g.:



2. It will be observed that the ninth in the major key may be either a major or minor ninth, the latter being chromatically altered. In minor keys the ninth is always minor, unless it resolves upwards by step to the third of the chord, forming the melodic form of the minor scale, e.g.:



3. In the appoggiatura treatment of the dominant ninth, the ninth from the root may resolve in the following ways:

- a. Downwards to the root of the chord.
- b. Upwards to the third of the chord.
- c. By arpeggio to the seventh, fifth, or third of the dominant seventh chord.

The following examples will fully illustrate:

Ex. III

(a) (b) (c)

C Minor E flat Major

Detailed description: This musical example consists of three parts labeled (a), (b), and (c). Part (a) is in C Minor, showing a C minor triad (C, E-flat, G) in the bass and a C minor triad with a minor ninth (C, E-flat, G, A-flat) in the treble. Part (b) is in C Minor, showing a C minor triad in the bass and a C minor triad with a minor ninth (C, E-flat, G, A-flat) in the treble. Part (c) is in E flat Major, showing an E flat major triad (E-flat, G, B-flat) in the bass and an E flat major triad with a major ninth (E-flat, G, B-flat, A) in the treble.

4. In the above examples the ninth is treated as an unessential tone and resolved upon dominant harmony. But when the ninth assumes the character of an essential tone and becomes part of the dominant harmony, i.e., the chord of the dominant ninth, it resolves with the rest of the chord upon new harmony, generally upon the tonic of the key, the root raising a fourth and the ninth falling a step to the fifth of the tonic chord, e.g.:

Ex. IV

Detailed description: This musical example shows a dominant ninth chord (F, A, C, E, G) in the treble and a C minor triad (C, E-flat, G) in the bass. The chord resolves to a C minor triad (C, E-flat, G) in the treble and a C minor triad (C, E-flat, G) in the bass.

5. In four-part writing it is obvious that one tone must be omitted. When the chord is taken in root position, it is always best to omit the fifth. But in the inverted positions it is always best to omit the root. In the third inversion, however, the fifth is frequently omitted and the root included. It will be observed that when the root is included, the ninth must appear at a distance of a ninth from the root.

The following examples will fully illustrate:

Ex. V

(a) (b) (c) (d) (e) (f)

Detailed description: This musical example consists of six parts labeled (a) through (f). Part (a) shows a C minor triad (C, E-flat, G) in the bass and a C minor triad (C, E-flat, G) in the treble. Part (b) shows a C minor triad (C, E-flat, G) in the bass and a C minor triad (C, E-flat, G) in the treble. Part (c) shows a C minor triad (C, E-flat, G) in the bass and a C minor triad (C, E-flat, G) in the treble. Part (d) shows a C minor triad (C, E-flat, G) in the bass and a C minor triad (C, E-flat, G) in the treble. Part (e) shows a C minor triad (C, E-flat, G) in the bass and a C minor triad (C, E-flat, G) in the treble. Part (f) shows a C minor triad (C, E-flat, G) in the bass and a C minor triad (C, E-flat, G) in the treble.

NOTE: The above progressions are all available in the minor key, provided that the ninth is always minor. The major ninth generally sounds best when above the third of the chord; consequently, the fourth inversion (e) is more effective in the minor key. The aural effect of (e) and (f) will make this clear.

6. It will readily be seen that the dominant ninth in inverted form, with root omitted, is identical with the leading-tone seventh in major keys and the diminished seventh in minor keys. If the chord is regarded as a secondary seventh, the normal resolution may be as follows:

Ex. VI

?

The freer resolution will be upon the tonic as follows:

Ex. VII

7. When resolving the inversions of the dominant major ninth upon the tonic or any of its inversions, forbidden consecutive fifths may be avoided if the fifth and major ninth move in contrary motion, e.g.:

Ex. VIII

(a) (b) (c)

bad good ?

NOTE: The diminished fifth to perfect fifth in (c) is tolerable. But this progression between the bass and any other part is strictly forbidden. The following example will make this clear:

Ex. IX

(a) (b)

bad good

8. The inversions of the dominant ninth, particularly in the form of the diminished seventh, are often decorated by accented passing tones or appoggiaturas, as may be seen in the following examples:

Ex. X

(a) (b) (c) (d)

(e) (f) (g) (h) (i)

NOTE: It will be observed that in (f) and (h) the root itself is used as an unessential tone against the ninth. In this case it is not regarded as the fundamental tone and consequently needs resolution. It is interesting to note that the unessential tone above the minor ninth in (i) is not considered as "false relation" against the third of the chord.

9. Chords of the ninth formed on other degrees of the scale are sometimes used. Like the dominant ninth in root position, the

fifth is generally omitted in four-part writing. The secondary ninths are impractical in inversions with the root included; when the root is omitted they become identical with secondary sevenths.

10. The resolution of a secondary ninth is as follows:

- a. The ninth falls one step.
- b. The seventh falls one step.
- c. The root rises a fourth.

The following example will make this clear:

Ex. XI

11. The secondary ninth on the supertonic often resolves upon the second inversion of the tonic triad; the ninth and seventh remaining while the other parts move, e.g.:

Ex. XII

12. The secondary ninth on the subdominant often resolves upon the dominant seventh:

Ex. XIII

13. A careful study of the following examples will materially aid the student in writing the exercises in the Workbook:

Ex. XIV



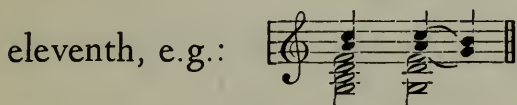
Ex. XV



NOTE: The student should clearly understand that when the ninth is resolved upon the dominant seventh or secondary seventh chord it is considered to be an appoggiatura. But when it resolves with the rest of the chord upon new harmony, it becomes an essential tone and is an integral part of the chord of the ninth.

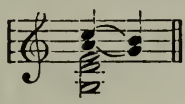
CHORD OF THE DOMINANT ELEVENTH

1. The addition of two thirds above the chord of the dominant seventh produces what is generally known as the dominant eleventh, e.g.:



2. The ninth and eleventh over the dominant seventh are most frequently used as appoggiaturas, and resolve upon the chord of the

dominant seventh, e.g.:

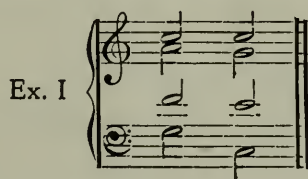


When the ninth and eleventh assume the character of essential tones and resolve with the rest of the chord upon new harmony, generally the tonic of the key, the combination produces the true chord of the dominant eleventh.

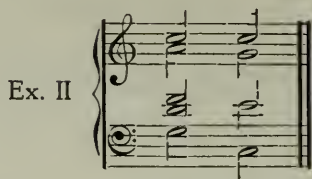
3. The true chord of the dominant eleventh is very rarely used, and is possible only in root position. In four-part writing, the only tones available are the root, seventh, ninth, and eleventh. The resolution upon tonic harmony is as follows:

- a. The root rises or falls to the tonic.
- b. The eleventh remains in the same part.
- c. The ninth and seventh fall one step.

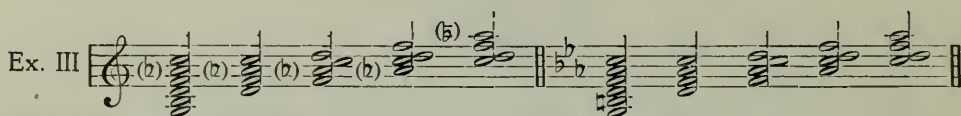
The following example will fully illustrate:



NOTE: In five parts the fifth is included, but the third is always omitted, e.g.:



4. In all inversions of the dominant eleventh, the root and third are always omitted and the chord becomes identical with the supertonic seventh in major or minor keys. It will be observed that the fifth may be chromatically lowered in major keys, e.g.:



NOTE: It will readily be seen that the above inversions are identical with the supertonic seventh, and that most of the combinations forming different aspects of the dominant eleventh have been fully treated in previous chapters on appoggiaturas and secondary sevenths.

CHORD OF THE DOMINANT THIRTEENTH

1. Like the dominant ninth and eleventh, most of the combinations classified as the dominant thirteenth are simply appoggiaturas sounded against the chord of the dominant seventh, e.g.:

Ex. I

V13th V13th V7th V13th V7th V13th V7th

NOTE: In (b) with all tones present, forbidden consecutive 5ths appear in the resolution.

2. Other combinations known as the dominant thirteenth are simply secondary sevenths with one or more tones of the chord chromatically altered.

3. The complete chord of the dominant thirteenth is seldom used with all tones present; certain tones from the whole series are selected. When the four upper tones are used, the combination becomes identical with the secondary seventh on the subdominant:

omitted

4. The dominant thirteenth may be used in the following ways:

- a. As an appoggiatura proceeding upwards or downwards to a tone of the chord of the dominant seventh or ninth.
- b. As an essential tone, being an integral part of the chord, resolving upon new harmony; generally the tonic of the key, e.g.:

Ex. II

V13th V7th V13th V7th V13th V7th I V13th V9th I

- (a) Appoggiatura thirteenth and ninth resolving on dominant seventh in contrary motion.
- (b) Appoggiatura thirteenth and eleventh resolving on dominant seventh in similar motion.
- (c) Appoggiatura thirteenth resolving upwards to dominant seventh.
- (d) Appoggiatura thirteenth leaping to leading tone of dominant major ninth.

When the thirteenth assumes the character of an essential tone, it displaces the fifth of the chord, resolving upon tonic or submediant harmony by falling a third or remaining in the same voice, e.g.:

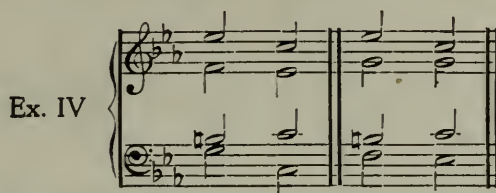
Ex. III

- (a) Thirteenth, third and root only, in root position and first inversion, resolving upon the tonic.
- (b) Thirteenth, with dominant seventh in root position, first inversion and third inversion, resolving upon submediant and tonic harmony.
- (c) Thirteenth, with dominant ninth, resolving upon tonic harmony.
- (d) Thirteenth, third and root only, the thirteenth remaining in the same voice while the other parts proceed to tonic harmony.
- (e) Thirteenth with dominant seventh; the thirteenth remain-

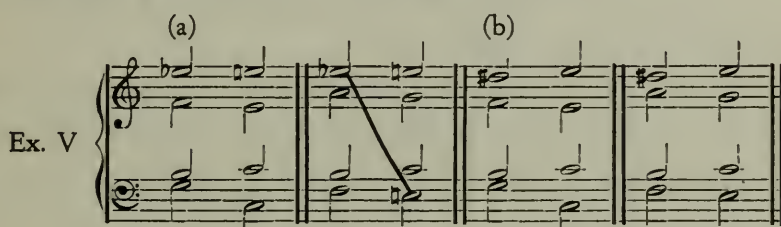
ing in the same part while other parts proceed to tonic harmony.

NOTE: The thirteenth and fifth never appear together.

5. In minor keys, the thirteenth is always minor; any of the above examples may be used with minor key signature and raised leading-tone, e.g.:



6. It is interesting to note that the chromatically raised fifth of the dominant chord is considered by some theorists as the lowered dominant thirteenth written in "expedient false notation." This may be considered as the origin of the chord, and it may be written D sharp instead of E flat when the thirteenth ascends a semitone. The following examples will make this clear:



NOTE: It will be observed that the aural effect of (a) and (b) is identical, and that the appearance of "false relation" is avoided by the notation in (b). A careful study of the following examples will fully illustrate the purpose of this notation:



The aural effect of (a) and (b) is identical, but the notation in (a) is obviously more logical.

7. The secondary seventh on the subdominant, considered by some theorists the incomplete form of the dominant thirteenth, frequently appears with the third and seventh lowered by chromatic alteration. These chromatic alterations produce many remarkable effects, as may be seen in the following illustrations:

Ex. VII

(a) (b) (c)

IV 7 5 IV 6 3 IV 7 3

8. Before proceeding with the exercises on the dominant thirteenth, the student will do well to study carefully the following suggestions:

- In the majority of cases, the thirteenth will sound best above the seventh of the chord.
- The thirteenth as an appoggiatura will, however, produce an excellent effect below the seventh, particularly if the seventh is sustained and the thirteenth appears in a prominent melodic progression.
- When the seventh is included in the chord of the thirteenth, the resolution of the thirteenth by a downward leap of a third is generally more effective than when the note remains in the same part.

The following examples will fully illustrate:

Ex. VIII

(a) (b) (c)

good bad good ?

CHROMATIC HARMONY

1. In addition to using the chromatically altered chords spoken of in Chapter XXVIII, the harmonic material may be considerably increased and the boundaries of the key greatly extended by borrowing certain diatonic chords belonging to near related keys. These borrowed chords are termed "TRANSITIONAL CHORDS" and are used in such a manner as to cause no actual modulation from the original key center. The most appropriate chords for such treatment are the *dominant harmonies* of the dominant and subdominant keys, e.g.:

Ex. I

(a) (b)

Key C Key G Key C

2. A careful study of the above example will show that in (a) the chromatically altered supertonic becomes the dominant of G and produces a modulation from C to G. But in (b) no modulation takes place, because the chords preceding and following the chromatically altered chord are definitely in the key of C, and the chord is regarded as the chromatic triad on the supertonic of C; the modulation is checked by the appearance of B and F natural in the succeeding chord.

3. It will be well to remember, however, that no single chord can establish a key, and that a chromatic chord which contains one or more tones foreign to the diatonic scale, although suggesting a modulation, does not disturb the original key center.

4. It will be observed that if the altered supertonic is followed by a common chord of the dominant key, it is regarded as the "dominant of the dominant" and induces a modulation to that key.

But when the chord is followed by a chord containing a tone that contradicts the raised third—i.e., the dominant seventh or ninth, or the tonic chord in root or inverted position—it is then regarded as a chromatically altered chord.

The following example will make this clear:

Ex. II

Key C I 4 6 6 4 6 6 7 I C minor I 4 6 6 4 6

I 4 V 7 I C major I 3 II I 4 V 8 λ I

NOTE: It will be observed that the chromatically altered tone always proceeds to the succeeding chord by rising or falling a semitone. The following progression should be carefully avoided:

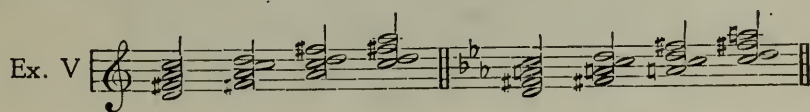
Ex. III

5. If the raised third of the chromatic supertonic triad is followed by the seventh of the dominant seventh in a different part, the natural seventh does not stand in "false relation" if the chromatically altered tone rises as in the following example:

Ex. IV

6. The raised third of the supertonic triad, which is as sensitive as a leading-tone, should not be doubled.

7. The supertonic chromatic triad frequently appears with a minor seventh from the root, producing a chord identical with the *dominant seventh* of the dominant key, e.g.:



This chord is used in practically the same manner as the chromatic triad on the supertonic. The seventh from the root may be treated as follows:

- When followed by dominant harmony, the seventh may either rise or fall one degree.
- When followed by tonic harmony, the seventh remains in the same part.

The following examples will make this clear:



NOTE: As in the case of the dominant seventh chord, the chromatic supertonic seventh is available in all inversions. In root position the fifth is frequently omitted and the root doubled. In second inversion the root may be omitted and the seventh doubled, e.g.:



8. By adding a minor seventh to the tonic triad, a chord identical with the dominant seventh of the subdominant key is formed. If this chord is followed by the tonic chord of the subdominant

key, it produces a modulation and is regarded as the dominant of the new key, e.g.:

Ex. VIII

Key C Key F

But when used as a transitional chord in such a manner as not to affect the key center, it is regarded as the chromatic seventh upon the tonic e.g.:

Ex. IX

Key C

9. The chromatic tonic seventh is available in all inversions in major and minor keys. It will be observed that the seventh is lowered in the major form, and the third raised in the minor, e.g.:

The resolutions most generally used are as follows:

(a) (b)

Ex. X

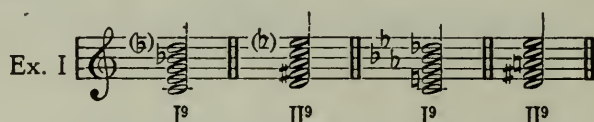
(c)

- (a) To the dominant seventh of the tonic key.
- (b) To the supertonic triad or supertonic seventh of the tonic key.
- (c) To the subdominant triad of the tonic key.

NOTE: In (c) the feeling of modulation to the subdominant key is checked by the dominant seventh chord resolving upon the tonic.

CHROMATIC CHORDS OF THE NINTH, ELEVENTH AND THIRTEENTH

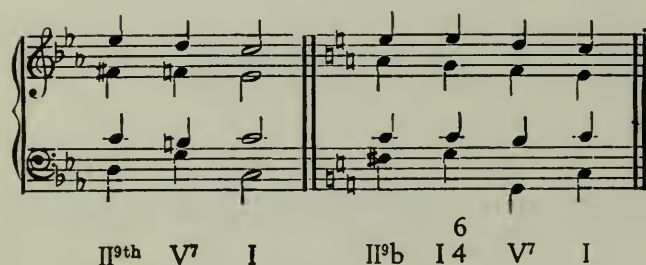
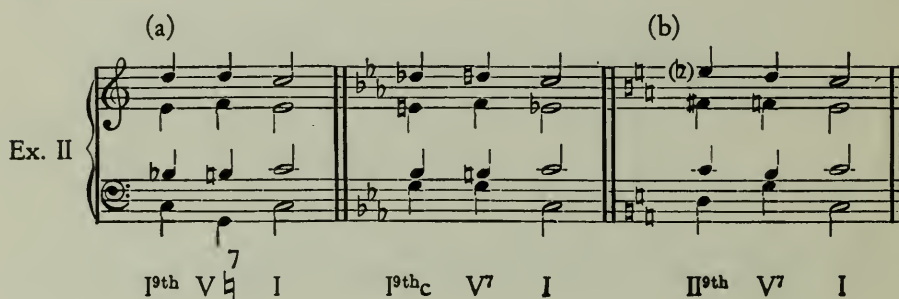
1. By adding a major or minor ninth to the tonic and supertonic chromatic chords of the seventh, chords identical with the dominant ninth of the subdominant and dominant keys, respectively are formed, e.g.:



NOTE: In major keys the ninth may be either major or minor, but in minor keys it is generally minor.

2. The treatment of these "borrowed chords" is similar to that of the dominant ninth. The ninth may be used as an appoggiatura or as an essential tone of the chord, in which case the ninth may rise or fall a second or remain in the same part.

The following examples will make this clear:



3. It will be observed that in the inversions the root is omitted,

and the chord becomes identical with the diminished seventh chord of the subdominant or dominant key, respectively.

These chords may be useful in modulation, but when used as chromatic chords in a transitional manner they should be followed by dominant or tonic harmony so as to avoid the feeling of modulation from the original key center.

4. To avoid unnecessary accidentals and simplify reading, the minor ninth, either from the tonic or supertonic, is sometimes enharmonically changed to an augmented eighth, e.g.

Ex. III

(a) (b) (c)

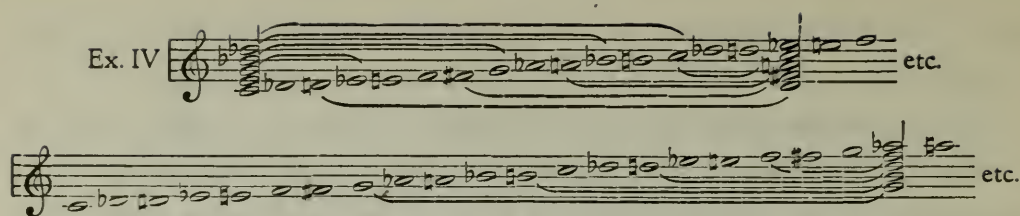
root omitted.....

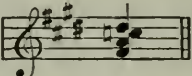
It will be observed that in (b) only one accidental is used, and that the chord is identical with the second inversion of the dominant minor ninth of E with root omitted, e.g.:

The resolution of (b), however, is upon the tonic chord of C major, and the chord is considered, therefore, as the supertonic minor ninth of C major with root omitted, written in "expedient false notation."

It will be well to remember that all chromatic chords, correctly written, must conform to the notation of the harmonic chromatic scale of the tonic key, and that any tone that differs from this notation is regarded as "expedient false notation" and used only when the reading of a melodic progression is simplified thereby.

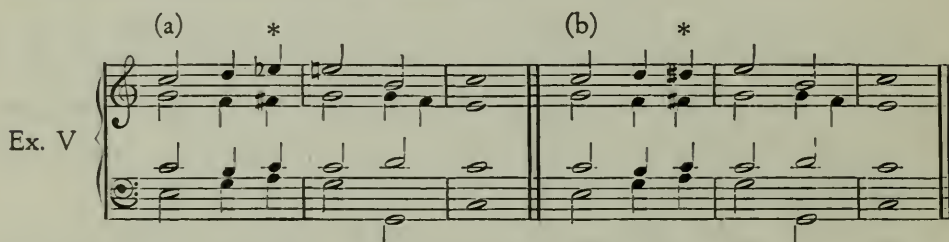
A careful study of the following illustration will materially aid the student in identifying the chord and its relationship to the tonic key:



5. It will be observed that the second inversion of the dominant minor ninth of E, i.e.,  is not contained in the above scale. It is obvious, therefore, that if this chord resolves to E, it produces a modulation from C to E, and the chord is then considered as the dominant minor ninth of E. But when this chord resolves to the tonic chord of C, it is regarded as the supertonic ninth of C written in "expedient false notation," e.g.:



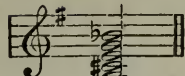
The illustrations which follow will clearly show the advantage of writing in this manner:



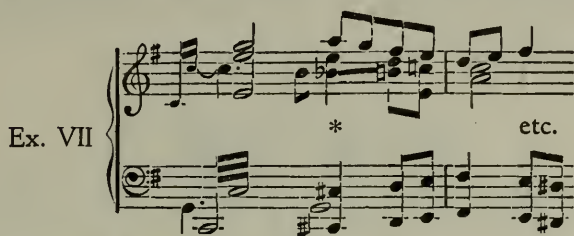
The following well-known excerpt from the chorale in Wagner's *Die Meistersingers* is an excellent example of "false notation":



*NOTE: It will be observed that this chord contains the augmented fourth from the tonic of the key, which indicates that the root is the supertonic, and that the

chord is unquestionably the supertonic minor ninth, e.g.:  Furthermore, if this chord were written with a B flat, two accidentals would be necessary, and the B flat sounded against the C sharp would give the impression of a downward instead of an upward progression.

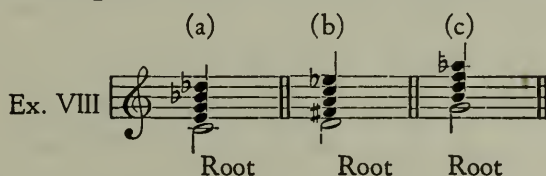
This may be clearly seen by comparing the notation of the following example with the above:



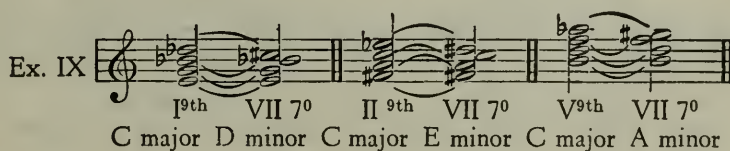
6. The rules given below will materially aid the student in identifying the chords of the minor ninth when the root is omitted:

- The presence of the lowered, or minor, seventh of the key indicates a tonic root.
- The presence of raised subdominant of the key indicates a supertonic root.
- The presence of the leading-tone of the key indicates a dominant root.

The following examples will make this clear:

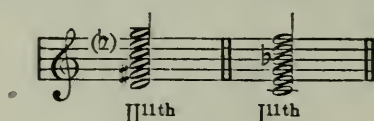


NOTE: These chords may be enharmonically changed in "expedient false relation" as follows:



It will be observed that the enharmonically changed chords with the root omitted are identical with the diminished seventh of the *relative minor* of the subdominant, dominant, and tonic of the key, respectively, i.e., D minor, E minor, and A minor. This important feature will be fully treated in the chapter on modulation.

7. By adding another third above the chromatic supertonic and tonic eleventh, it is possible to form supertonic and tonic elevenths, e.g.:

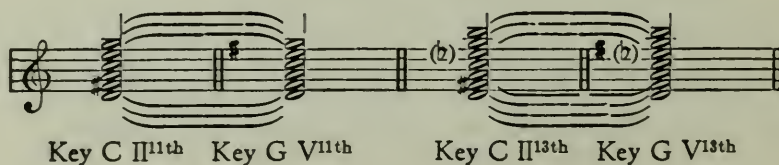


And by adding yet another third above the chromatic supertonic and tonic elevenths we obtain the supertonic and tonic thirteenths, e.g.:

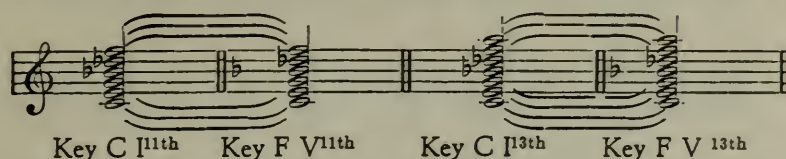


8. The chromatic supertonic and tonic elevenths and thirteenths are rarely used as essential harmony. They are more frequently employed as suspensions, passing-tones or appoggiaturas embellishing the supertonic or tonic chords of the seventh or ninth, and their treatment as such is the same as in the case of dominant harmony already dealt with in a previous chapter.

9. The chromatic supertonic eleventh and thirteenth are identical with the dominant eleventh and thirteenth of the dominant key, e.g.:



The chromatic tonic eleventh and thirteenth are identical with the dominant eleventh and thirteenth of the subdominant key, e.g.:



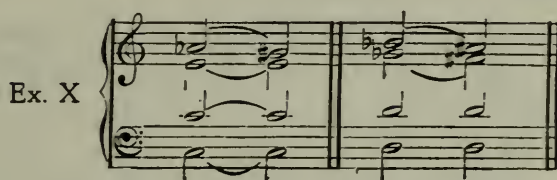
10. As an essential harmony, the chromatic supertonic eleventh is used only in inverted positions with the root and third omitted; in this form it is identical with the secondary seventh on the submediant of the key, e.g.:



NOTE: The fifth of the incomplete form is sometimes chromatically lowered in the major key.

11. The chromatic tonic eleventh as an essential harmony, even with the third and root omitted, is practically useless.

12. The chromatic supertonic and tonic thirteenths are rarely used as essential harmony. The augmented triads on the supertonic and tonic of the key are, however, regarded by some theorists as thirteenths enharmonically changed, e.g.:



NOTE: It will be observed that the A flat is written G sharp, the B flat as A sharp, and the G flat as F sharp.

13. The tonic thirteenth frequently appears in "false notation" in the form of a tonic minor seventh with the fifth chromatically raised, e.g.:

(a) (b)

Ex. XI

NOTE: In (a) the tonic thirteenth resolves upon the chord of the dominant seventh. In (b) the tonic minor seventh, with augmented fifth, resolves upon subdominant harmony, the raised fifth moving upwards one degree.

14. The $\frac{6}{4}$ chord on the tonic or supertonic of the key is also regarded by some theorists as the thirteenth, e.g.:

Ex. XII

15. These chords in their various forms are frequently used by modern composers in modulation. The following is an example of the dominant thirteenth of the key of F minor written in "false notation," i.e., as the dominant seventh with raised fifth, modulating from F minor to F major:

Ex. XIII

The following illustration will make this clear:

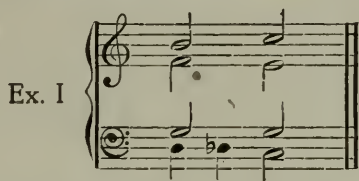
Ex. XIV

V^{13th} V⁷_{♯5}

THE CHORD OF THE AUGMENTED SIXTH

1. The chord of the augmented sixth, like many other harmonic effects, has resulted from the substitution of an unessential tone for the harmony tone it was intended originally to decorate.

In the following example, the resolution of the second inversion of the dominant seventh, resolving upon tonic harmony, is decorated by a chromatic passing-tone—D flat:



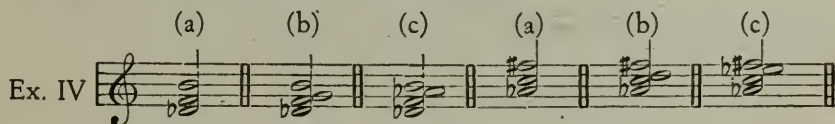
By substituting the chromatic passing-tone for the essential tone, D, we form the chord known as the augmented sixth, e.g.:



2. In like manner, a passing-tone in the resolution of the supertonic minor ninth may be substituted for the essential tone, forming an augmented sixth on the lowered submediant of the key, e.g.:



3. The chords of the augmented sixth are available in both major and minor keys, appearing on the minor second and minor sixth of the key in the following forms:



These chords are identified by the various intervals they contain; they are known as follows:

- a. "Italian sixth," containing a major third and augmented sixth.
 - b. "French sixth," containing a major third, augmented fourth and augmented sixth.
 - c. "German sixth," containing a major third, perfect fifth, and augmented sixth.
4. These chords are various forms of the chromatically altered dominant and supertonic harmony, e.g.:

Ex. V

- (a) Dominant seventh with root omitted.
- (b) Dominant seventh in second inversion.
- (c) Dominant minor ninth with root omitted.
- (d) Supertonic seventh with root omitted.
- (e) Supertonic seventh in second inversion.
- (f) Supertonic minor ninth with root omitted.

5. The various forms of the chord of the augmented sixth upon the lowered supertonic may be resolved as follows:

Ex. VI

Italian sixth

French sixth

German sixth

* The consecutive fifths, moving by step of a semitone, are not objectionable in this case.

NOTE: Being an altered form of dominant harmony, each chord naturally resolves upon the tonic in root position, or the subdominant in second inversion. It will be observed that (c) in each case modulates to the subdominant key.

6. The various forms of the chords of the augmented sixth upon the lowered submediant may be resolved as follows:

Ex. VII

(a)	(b)	(a)	(b)	(a)	(b)
Italian sixth		French sixth		German sixth	

NOTE: The chords of the augmented sixth on the lowered submediant, being altered forms of supertonic harmony, naturally resolve upon the dominant in root position, or the tonic in second inversion.

7. The augmented sixth is sometimes formed as an appoggiatura, resolving upon the essential tone of the dominant or supertonic chord to which it belongs, e.g.:

Ex. VIII

8. It will be observed that in all resolutions, the two tones forming the interval of the augmented sixth move in contrary motion to each other by step of a semitone. In the following example, however, the "French sixth" upon the supertonic of F minor resolves to the subdominant of the key by leap:

R. G. J.
ten

Ex. IX

cold with the breath of the o - cean's foam etc.

cold with the breath of the o - cean's foam etc.

cold with the breath of the o - cean's foam etc.

cold with the breath of the o - cean's foam etc.

cold with the breath of the o - cean's foam etc.

cold with the breath of the o - cean's foam etc.

9. All the various forms of the chord of the augmented sixth on either the lowered supertonic or the lowered submediant may be used in inverted positions; but the form most frequently used in inversion is the "German sixth," e.g.:

Ex. X

(a) (b) (c) (d) (e)

- (a) "Italian sixth" in first inversion.
- (b) "French sixth" in second inversion.
- (c) "German sixth" in third inversion.
- (d) "German sixth" in first inversion.
- (e) "German sixth" in second inversion.

10. It is interesting to note that the German sixth on the lowered supertonic may be enharmonically changed to the dominant seventh of the lowered dominant or raised subdominant of the key, re-

spectively, i.e., in the key of C, G flat major, or F sharp major or minor, e.g.:

Ex. XI

6
3

G flat V7

6
3

F sharp V7

In a similar manner the German sixth on the lowered submediant may be enharmonically changed to the dominant seventh of the lowered supertonic or the raised tonic of the key, i.e., in the key of C, D flat major, or C sharp major or minor, e.g.:

Ex. XII

6
3

D flat V7

6
3

C sharp minor V7

11. A chord similar to the German sixth may be formed upon the subdominant of the key by chromatically raising the sixth of the first inversion of the supertonic seventh, e.g.:

Ex. XIII

This chord, regarded by some theorists as the incomplete form of the dominant thirteenth written in "expedient false notation," resolves upon tonic harmony. The following examples will make this clear:

(a)

Ex. XIV

(b)

(c)

(a) Dominant minor thirteenth enharmonically altered.

- (b) Incomplete form of dominant thirteenth resolving upon tonic harmony.
- (c) Incomplete form of dominant thirteenth written in "expedient false notation."

NOTE: The chord written with the E flat would readily modulate to the key of B flat major; but in example (b) the key center is not disturbed and the passage is definitely in C major. The following example will fully illustrate:

Ex. XV



MODULATION

1. Modulation, one of the most valuable resources open to the composer, may be defined as the art of passing from one tonic, or key center, to another.

2. Modulations have frequently occurred in many of the examples in previous chapters and in the exercises given in the Workbook. These simple modulations have been planned so that the student might naturally develop the feeling for modulation, and learn the art of modulating for himself with ease and confidence.

3. From his study of the chapters on chromatically altered chords, the student will have learned that:

- a. The appearance of one or more accidentals in a melody does not of necessity indicate a modulation.
- b. Certain chromatically altered chords may be introduced into a key without disturbing the original key center.

It will be well to remember, therefore, that when any chromatically altered chord, formed on the harmonic chromatic scale of the tonic key, is followed by diatonic harmony of the same key or by another antagonistic chromatic harmony, the progression is regarded as transitional. But whenever chords proper to a new key are followed, or confirmed, by the dominant and tonic harmony of the new key, a modulation takes place.

4. In the following example it will readily be seen that although chords borrowed from the dominant key (E flat) are used, the feeling of modulation is immediately checked by the appearance of chords characteristic of the tonic key, and the passage is definitely in the key of A flat:

Ex. I

Beethoven

5. A careful study of the following example will show that at (a) we have an incomplete form of the supertonic ninth in C minor; at (b) this chord is enharmonically changed to the incomplete form of the dominant minor ninth of E minor and resolved to the tonic harmony of that key, completing, or confirming, a modulation from C minor to E minor:

Ex. II

Beethoven

9th
9th
C minor II
V E minor

NOTE: The following illustration will make this clear:

C minor II 9th E minor V 9th I 4 V⁷ I

6. Modulation to the various keys may be classified as follows:

- a. Natural modulation, in which the key center is passed from the tonic key to either of its related keys.
- b. Extraneous modulation, in which the key center is passed from the tonic key to an unrelated key.

The related keys are those having the same key signature as the given key, or one sharp or flat more or less, e.g.:

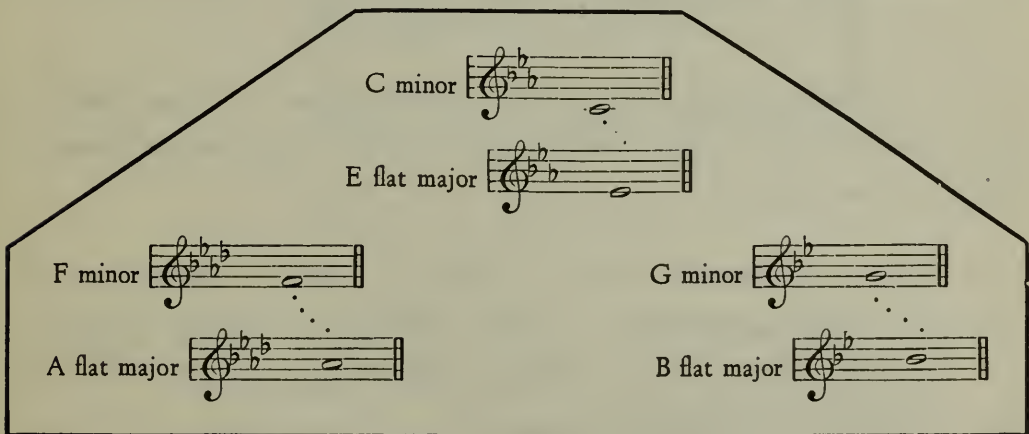
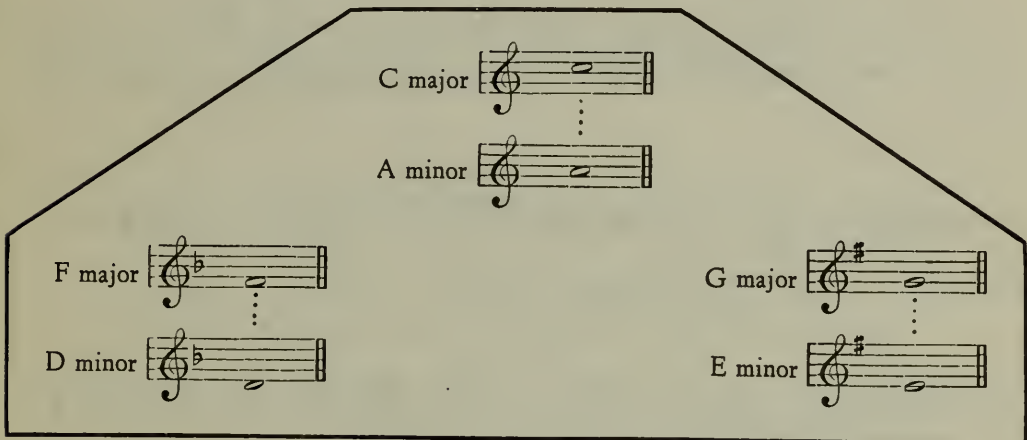
IN MAJOR KEYS:

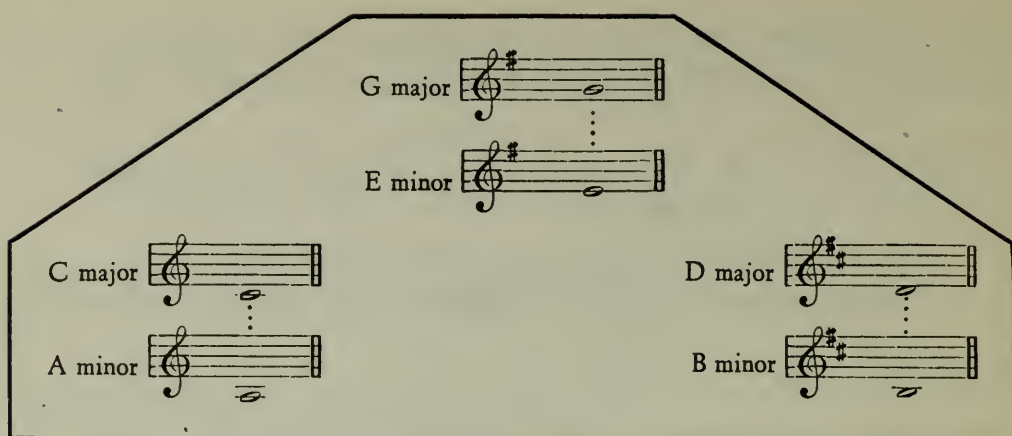
- a. The relative minor.
- b. The subdominant and its relative minor.
- c. The dominant and its relative minor.

IN MINOR KEYS:

- a. The relative major.
- b. The subdominant minor and its relative major.
- c. The dominant minor and its relative major.

The related keys of C major, C minor, and G major may be seen in the following diagrams:





NOTE: It will be clearly seen that the keys on the flat side—i.e., to the left—have one flat more or one sharp less, and the keys on the sharp side—i.e., to the right—have one sharp more or one flat less.

7. It is interesting to note that the tonic chord of these related keys is contained in the diatonic scale of the tonic, or primary key, e.g.:

8. To modulate successfully between two keys, it is necessary to plan some form of connection between them. These connections, or means of modulation, are termed:

- a. DIATONIC MODULATION, in which a chord common to the two keys is used as a "pivot" chord, i.e., approached as a diatonic chord of the primary key and quitted as a diatonic chord of the second, e.g.:

Ex. III

Key C I V7 | I 6
Key G IV I V7# I 4

*NOTE: This chord is approached as the tonic of the primary key, C, and quitted as the subdominant of G major.

b. CHROMATIC MODULATION, in which a chromatically altered chord of the primary key is used as the "pivot" or chord of connection, e.g.:

(a)

Ex. IV

Key C I IV 5b | 8 7 8 7
Key E flat II V VI II V I

or when a diatonic chord of the primary key is considered as a chromatically altered chord of the second, e.g.:

(b)

Ex. V

Key C I I3 IV | I 6
Key B flat IIb V7 I 5

NOTE: In (a) the pivot chord is approached as the chromatically altered subdominant of the primary key, C, and quitted as the supertonic of E flat. But in (b), the pivot

chord is approached as the tonic chord of the primary key and quitted as a chromatic supertonic triad of B flat.

- c. ENHARMONIC MODULATION, in which one or more tones of a chord are changed by name without change of sound, the various tones becoming other degrees of the new scale:

Ex. VI

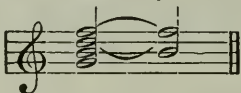
Key C I 6
 5 G flat V⁷ I
 II

NOTE: In the above example the German sixth is approached as a chromatically altered chord on the lowered supertonic of C, and enharmonically changed to the dominant seventh of G flat. It is interesting to note that modern composers do not indicate the enharmonic change; the pivot chord is written as a chromatically altered chord in the key of C and resolved as the dominant seventh of G flat, as follows:

Ex. VII

6
Key C I II⁵
Key G flat V⁷ I

9. The importance of the dominant seventh chord in modulation must be emphasized. This chord contains the two most characteristic tones of the key, i.e., the leading-tone and the subdominant, e.g.:



It is obvious that this chord cannot diatonically belong to any other than the key of C, because any key with sharps in the signature must include F sharp, and any key with flats in the signature must include B flat. It is, therefore, by the use of this chord followed by tonic harmony that a key is fully defined. This also applies to all

dominant discords that contain the leading-tone and subdominant of the key. Hence the student should bear in mind that, as a rule, the new key is entered through its dominant, and that dominant harmony, in some form, is always essential to establish and confirm a modulation to a new key.

10. Most modulations are effected by using a chord common to both keys as a "pivot" chord, or by using two chords belonging to both keys that have at least one tone in common which may be used as a "pivot" tone, providing a smooth approach to the dominant harmony of the new key.

Chords common to both keys may be used to effect a modulation as follows:

- a. A diatonic chord of the primary key may become a diatonic chord of the secondary key, e.g.:

Ex. VIII

(a) (b) (c)

Key C	I	V ⁷	6	13	Key C	I	V ⁷	I	Key C	I	V ⁷	I
Key G	IV ³	V ⁷	I	6	Key F	V	V ⁷	I	Key E minor	VI	14	V ⁷ I

- (a) Tonic of C becomes subdominant of G.
 (b) Tonic of C becomes dominant of F.
 (c) Tonic of C becomes submediant of E minor.

Ex. IX

(a) (b) (c)

Key C	I	IV	6	4	Key C	I	IV	6	4 8 7
Key F	I	IV	I	V ⁷ I	Key B flat	V	V ⁷ I	Key A minor	VI I V I

- (a) Subdominant of C becomes tonic of F.
 (b) Subdominant of C becomes dominant of B flat.
 (c) Subdominant of C becomes submediant of A minor.

Ex. X

(a) (b) (c)

Key C I | V | 6 8 7
 Key G | I II I V | I

Key C I | V | 6
 Key D | IV I V⁷ | I

Key C V⁷ I | V | 6
 Key B minor | VI I V | I

- (a) Dominant of C becomes tonic of G.
 (b) Dominant of C becomes subdominant of D.
 (c) Dominant of C becomes submediant of B minor.
 b. A diatonic chord of the primary key may become a chromatic chord of the secondary key, e.g.:

(a) (b) (c)

Key C I V⁷ | 6 13 87
 Key B minor | II 3 V | I

Key C I V⁷ | I |
 Key B flat | II V⁷ | I

Key C I V⁷ | I |
 Key E | VI V⁷ | I

- (a) Tonic of C becomes lowered supertonic of B minor.
 (b) Tonic of C becomes chromatic supertonic of B flat.
 (c) Tonic of C becomes lowered submediant of E.

Ex. XII

(a) (b) (c)

Key C I V⁷ I | IV | 8 7
 Key E minor | II V⁷ I | Key E flat | II V⁷ I | Key A minor | VI II⁷ V | I

- (a) Subdominant of C becomes lowered supertonic of E minor.
 (b) Subdominant of C becomes chromatic supertonic of E flat major.
 (c) Subdominant of C becomes lowered submediant of A minor.

Ex. XIII

(a) (b) (c)

Key C I | V | 8 7 Key C I | V | Key C I | V |
 Key F sharp minor | H I V I Key F | II V⁷ I Key B | ~~V~~ II⁷ V I⁷

- (a) Dominant of C becomes the lowered supertonic of F sharp minor.
 (b) Dominant of C becomes the chromatic supertonic of F major.
 (c) Dominant of C becomes the lowered submediant of B major.
 c. A chromatic chord of the primary key may become a diatonic chord of the secondary key, e.g.:

Ex. XIV

(a) (b) (c)

Key C I V⁷ I | H | 8 7 Key C I V⁷ I | H | Key C I V⁷ I | H |
 Key A flat | IV V I Key G flat | V V⁷ I Key D flat | I V⁷ I

(d)

Key C I V⁷ I | H |
 Key F minor | ~~V~~ 6 ~~V~~ I

- (a) Lowered supertonic of C becomes subdominant of A flat.
- (b) Lowered supertonic of C becomes dominant of G flat.
- (c) Lowered supertonic of C becomes tonic of D flat.
- (d) Lowered supertonic of C becomes lowered submediant of F minor.

Ex. XV

Key C I | II |
Key D I V⁷ I

Key C I | II |
Key A IV I V⁷ I

Key C I | II |
Key G V V⁷ I

Key C I | II | 7
Key F sharp minor VI I V I

- (a) Chromatic supertonic of C becomes tonic of D.
- (b) Chromatic supertonic of C becomes subdominant of A.
- (c) Chromatic supertonic of C becomes dominant of G.
- (d) Chromatic supertonic of C becomes lowered submediant of F sharp minor.

Ex. XVI

Key C I | VI |
Key A flat I V⁷ I

Key C I | VI |
Key E flat IV 8 7 I

Key C I | VI |
Key D flat V V⁷ I

- (a) Lowered submediant of C becomes tonic of A flat.
- (b) Lowered submediant of C becomes subdominant of E flat.
- (c) Lowered submediant of C becomes dominant of D flat.
- d. A *chromatic chord of the primary key may become a chromatic chord of the secondary key, e.g.:*

Ex. XVII

(a) (b) (c)

Key C I V⁷ I | $\begin{array}{|c|} \hline \text{N} \\ \hline \end{array}$ 8 7 Key C I V⁷ I | $\begin{array}{|c|} \hline \text{N} \\ \hline \end{array}$ Key C I V⁷ I | $\begin{array}{|c|} \hline \text{II} \\ \hline \end{array}$ 87
 Key C flat II V I Key F major $\begin{array}{|c|} \hline \text{VI} \\ \hline \end{array}$ V⁷ I Key C sharp minor $\begin{array}{|c|} \hline \text{N} \\ \hline \end{array}$ V I

(d)

Key C I IV I | $\begin{array}{|c|} \hline \text{VI} \\ \hline \end{array}$
 Key G flat major $\begin{array}{|c|} \hline \text{N} \\ \hline \end{array}$ V⁷ I

- (a) Lowered supertonic of C becomes chromatic supertonic of C flat.
- (b) Lowered supertonic of C becomes lowered submediant of F.
- (c) Chromatic supertonic of C becomes lowered supertonic of C sharp minor.
- (d) Lowered submediant of C becomes chromatic supertonic of G flat.

A modulation by the use of a "pivot tone" common to two chords is fully illustrated in the following examples:

Ex. XVIII

Key C I || V⁵₃ I Key C I || V⁵₃ I Key C I || V⁵₃ I Key C I || V⁵₃ I

Key F Key D flat Key B flat Key G

- (a) Root of tonic triad of C becomes root of dominant seventh of F.
- (b) Root of tonic triad of C becomes third of dominant seventh of D flat.
- (c) Root of tonic triad of C becomes fifth of dominant seventh of B flat.
- (d) Root of tonic triad of C becomes seventh of dominant seventh of G.

Ex. XIX

Key C I || V⁵₃ I Key C I || V⁵₃ I Key C I || V⁵₃ I

Key A minor Key D minor Key B minor

- (a) The third of the tonic triad of C becomes the root of the dominant seventh of A minor.
- (b) The third of the tonic triad of C becomes the fifth of the dominant seventh of D minor.
- (c) The third of the tonic triad of C becomes the seventh of the dominant seventh of B minor.

Ex. XX

(a) (b) (c)

Key F V V I Key C I Key C I V₇ I Key C I V₇ I

Key C Key A flat Key D minor

- (a) The fifth of the dominant triad of F becomes the root of the dominant seventh of C.
- (b) The fifth of the tonic triad of C becomes the third of the dominant seventh of A flat.
- (c) The fifth of the tonic triad of C becomes the seventh of the dominant seventh of D minor.

NOTE: The use of a "pivot tone" may be applied to any chord in the key, and any tone of an unprepared discord may be used as a "pivot tone" connecting any other unprepared discord, i.e., the root of any discord may change to be the third, fifth, seventh, ninth, eleventh, or thirteenth, and the third may change to be the fifth, seventh, ninth, eleventh, or thirteenth, and so on for every tone of the chord, e.g.:

etc.

11. Modulation to remote keys is sometimes effected by changing the mode of the primary key, i.e., major to minor or minor to major, and modulating to a related key of the new tonic, e.g.:

Ex. XXI

Beethoven, Op. 27

The musical score consists of three systems of piano music. The first system begins in E major (one sharp) and 4/4 time, marked *pp*. The melody in the right hand features a series of eighth-note patterns, while the left hand provides a simple harmonic accompaniment. The second system continues the piece, showing a modulation to C major (no sharps or flats). The third system further modulates to B minor (two sharps) and concludes with the word "etc." indicating the piece continues.

NOTE: In the above example, the tonic key, E major, is changed to E minor; then follows a modulation to C major and B minor, both related keys to the new tonic. The following analysis of the harmonic structure will make this clear:

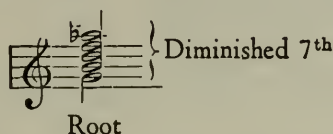
The harmonic analysis is presented as a sequence of chords and scale degrees across three systems. The first system is in E minor (one sharp). The second system modulates to C major (no sharps or flats). The third system modulates to B minor (two sharps). The analysis includes Roman numerals for chords and scale degrees for the melody.

System	Chord	Scale Degree
1	I	5
2	V ⁷	3
3	I	5
4	V ^{9th} #	5
5	V ⁷ #	5
6	I	5
7	II ⁷	5
8	II ⁷ 3	6
9	I 4	6
10	V#	5
11	I	5

Key E I
E minor C major B minor

MODULATION (continued). — *Enharmonic Modulation*

1. The most important chords employed in enharmonic modulation are the diminished seventh, augmented fifth or minor thirteenth, augmented sixth, and dominant seventh.
2. The diminished seventh chord, regarded as the dominant minor ninth with root omitted, consists of three minor thirds superposed one on the other, e.g.:



3. Any diminished seventh chord may, with varied notation, be written in root position, first, second, or third inversion, i.e.,

$$\begin{array}{cccc} 7 & 6 & 6 & 6 \\ 5, & 5, & 4, & \text{or } 4, \\ 3 & 3 & 3 & 2 \end{array}$$
so that the root will be different in each case, e.g.:

Ex. I

(a)	(b)	(c)	(d)
Root	Root	Root	Root
7	6	6	6
5	5	4	4
3	3	3	2

- (a) Diminished seventh of C major—root G.
- (b) Diminished seventh of A major—root E.
- (c) Diminished seventh of F sharp major—root C sharp.
- (d) Diminished seventh of E flat major—root B flat.

In minor keys the notation is as follows:

Ex. II

(a)	(b)	(c)	(d)

- (a) Diminished seventh of C minor—root G.
- (b) Diminished seventh of A minor—root E.
- (c) Diminished seventh of F sharp minor—root C sharp.
- (d) Diminished seventh of E flat minor—root B flat.

4. The inversions of this chord may also be enharmonically changed as follows:

(a) (b)

Ex. III

(c)

- (a) Diminished seventh of C in first inversion, and E flat in root position.
- (b) Diminished seventh of C in second inversion, E flat in first inversion, and F sharp in root position.
- (c) Diminished seventh of C in third inversion, E flat in second inversion, F sharp in first inversion, and A in root position.

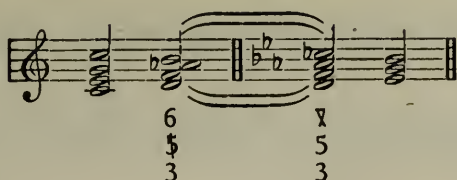
5. The diminished seventh of C may be written enharmonically with the root as the tonic minor ninth, or supertonic minor ninth of another key, e.g.:

Ex. IV

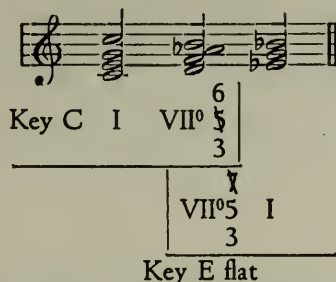
(a) (b) (c)

- (a) Root as dominant of C major and minor.
- (b) Root as supertonic of F major and minor.
- (c) Root as tonic of G major and minor.

NOTE: These diminished seventh chords may be used as "pivot chords," i.e., approached as the diminished seventh with dominant, tonic, or supertonic root of one key and resolved as a diminished seventh with dominant, tonic, or supertonic root of another, e.g.:



Modern writers do not, as a rule, indicate the enharmonic change, but use the "pivot chord" as follows:



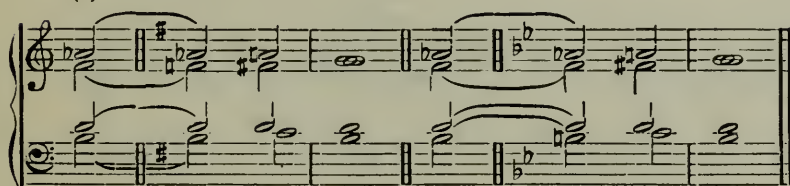
6. As each root may be regarded as dominant, supertonic, or tonic of either a major or minor key, modulation to twenty-four keys is possible by enharmonic change, i.e., approaching the chord as a dominant root of one key and resolving as either a dominant, supertonic, or tonic root of another key in root or inverted position. The following examples, beginning with the diminished seventh of C (dominant root) in root position, will fully illustrate:

Ex. V
(a)

(b)



(c)



- (a) Diminished seventh of C major and minor, dominant root—G.
- (b) Diminished seventh in F major and minor, supertonic root—G.
- (c) Diminished seventh in G major and minor, tonic root—G.

Ex. VI

(a) (b)

(c)

- (a) Diminished seventh of A major and minor, dominant root—E.
- (b) Diminished seventh in D major and minor, supertonic root—E.
- (c) Diminished seventh in E major and minor, tonic root—E.

Ex. VII

(a) (b)

(c)

(b) By sustaining one tone while the others ascend semitonically, e.g.:

Key C VII⁰ | V⁷ I C VII⁰ | V⁷ I C VII⁰ | V⁷ I C VII⁰ | V⁷ I

E major G major B flat D flat

(c) By raising one tone a semitone while the others are adjusted into some form of tonic harmony. In this case the raised tone will become the fifth of the tonic chord, e.g.:

Key C VII⁰ | $\begin{smallmatrix} 6 \\ 4 \end{smallmatrix}$ C VII⁰ | $\begin{smallmatrix} 6 \\ 3 \end{smallmatrix}$ C VII⁰ | $\begin{smallmatrix} 5 \\ 3 \end{smallmatrix}$ C VII⁰ | $\begin{smallmatrix} 6 \\ 4 \end{smallmatrix}$

Key F A flat C flat D major

8. The dominant minor thirteenth may also be enharmonically changed to either the supertonic or tonic minor thirteenth. In the following example the simplest form of the dominant minor thirteenth of C, i.e., the root, third, and thirteenth is changed to the supertonic minor thirteenth of F and tonic minor thirteenth of G, respectively:

Ex. IX

(a)

(b)

Key C | V^{13th} | II^{13th} V⁷ I C V^{13th} | II^{13th} V⁷ I C V^{13th} | I^{13th} V⁷ I C V^{13th} | I^{13th} V⁷ I

Key F major Key F minor G major G minor

9. The chord of the augmented sixth, i.e., $\begin{smallmatrix} 6 \\ 5 \\ 3 \end{smallmatrix}$, written either on

the lowered supertonic or lowered submediant of the key, may be enharmonically changed to a dominant seventh chord and resolved to either the tonic major or minor of the new key, e.g.:

Key F sharp major V⁷ I Key F sharp minor

C sharp major V⁷ C sharp minor

Conversely, dominant sevenths may also be enharmonically changed to augmented sixths and resolved to their respective keys, e.g.:

Key C# minor V⁷ I G major or minor

C# minor V⁷ I C major or minor

NOTE: These dominant sevenths may also be regarded as chromatically altered supertonic and tonic sevenths that can be resolved to their respective keys, e.g.:

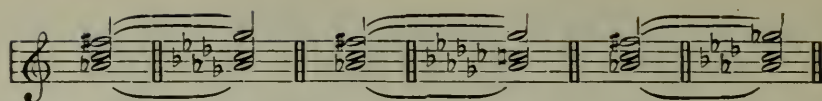
(a) (b) (c)

I⁷ V⁷ I

- (a) Dominant seventh of F sharp minor.
- (b) Supertonic chromatic seventh of B minor.
- (c) Tonic chromatic seventh of C sharp minor.

6

10. The augmented sixth (3) on the lowered supertonic or lowered submediant may also be enharmonically changed to be either the dominant seventh, the supertonic chromatic seventh, or the tonic chromatic seventh of the new key, e.g.:



- (a) Dominant seventh of D flat.
- (b) Supertonic chromatic seventh of G flat.
- (c) Tonic chromatic seventh of A flat.

NOTE: The fifth of the chord of the seventh is omitted in each case.

11. The sequence is frequently used as a means of modulating, especially in the development section of a sonata or fugue. The following example will clearly illustrate a modulation from the dominant to the tonic, or primary key, by the use of a short figure from the principal subject in real sequence:

Ex. X

R. G. J.



12. Having studied the various means of modulation, the student should carefully analyze the harmonic structure of the works of the great masters and note the various ways in which the chord progressions are decorated. The illustrations in these chapters merely give the chord connections; the exercises in the Workbook will furnish ample opportunity for decoration and construction of musical phrase.

The following example, written for male voices with piano accompaniment, will fully illustrate simple modulations in harmonic structure and figuration:

ENHARMONIC MODULATION

179

(From "Silent Strings" by R. G. J.)

— by joy and pain — Oh when were you played up-

— by joy— and pain — Oh when were you played up-

— by joy and pain — Oh when were you played up-

joy, by joy and pain — Oh when were you played up-

on — Was it in Sa-mar-cand or A - va -

on — Was it in Sa-mar-cand or A - va -

on — Was it in Sa-mar-cand or A - va -

on — Was it in Sa-mar-cand or A - va -

ten. pp rit. *rall.*

pp

lon? *mf a tempo* Strings of my

lon? *mf a tempo* Strings of my

lon? *a tempo mf* Strings of my

lon?

lon?

The first system of the musical score consists of five staves. The top four staves are vocal parts, each with the lyrics "lon?" followed by "Strings of my". The first two vocal staves have dynamic markings of *mf a tempo*, and the third has *a tempo mf*. The bottom staff is a piano accompaniment with a melodic line in the right hand and a bass line in the left hand.

heart too long have you si - lent *p*

heart too long have you si - lent *p*

heart too long have you si - lent *p*

Strings of my heart too long have you si - lent *p*

The second system of the musical score consists of five staves. The top four staves are vocal parts, each with the lyrics "heart too long have you si - lent". The first three vocal staves have a dynamic marking of *p*. The bottom staff is a piano accompaniment with the lyrics "Strings of my heart too long have you si - lent". The piano part features a melodic line in the right hand and a bass line in the left hand.

lain, too long have you si - lent

lain, too long have you si - lent

lain, too long have you si - lent

lain, too long have you si - lent

lain. When will you wake?

lain. When will you wake?

lain. When will you wake?

lain. When will you wake?

Ped. * Ped. * Ped.

PEDAL

1. A pedal tone, sometimes referred to as organ-point, is the name given a tone, invariably either the tonic or dominant, sustained through a succession of harmonies of which it may or may not form a part, e.g.:

Ex. I

Saint-Saens

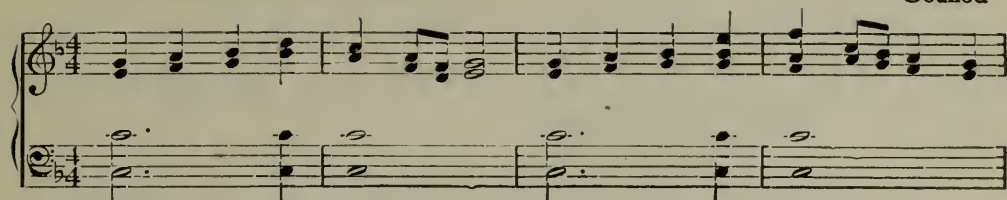
The musical score for Ex. I is in 2/4 time, key of D major. The first system shows a melody in the right hand and a sustained bass note (pedal) in the left hand. The second system shows a modulation, indicated by an asterisk, where the melody changes while the bass note remains sustained.

*NOTE: The tonic pedal is inverted and placed in the tenor and soprano part.

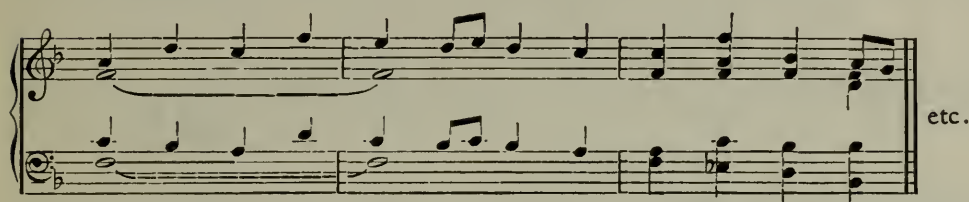
2. The above passage clearly illustrates that:
 - a. The pedal tone may or may not form part of the harmony.
 - b. A modulation may take place over a pedal.
 - c. A pedal may be inverted to one or more of the upper parts.
3. When a dominant and tonic pedal are used in succession, the dominant, as a rule, precedes the tonic. The following illustration will make this clear:

Ex. II

Gounod

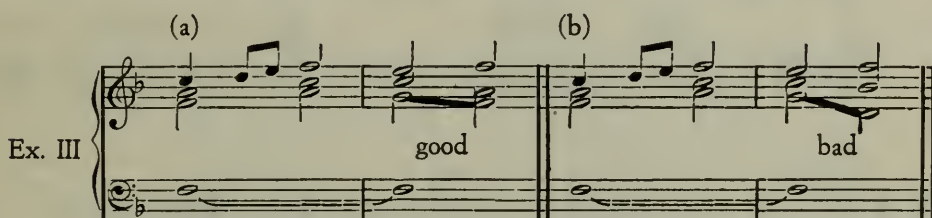


Dominant pedal



Tonic pedal

4. When a pedal is sustained or repeated, forming no part of the harmony, the part above the pedal is regarded as the bass for the time being, and should proceed according to the rules of part-writing applicable to a bass part, e.g.:



NOTE: In (a), the pedal (F) does not form part of the V_4^6 chord; the G in the tenor part is therefore considered as the bass, which proceeds by step to the tonic of F.

In (b), the G, being the bass of a $\frac{6}{4}$ chord, proceeds by leap to the 3rd of the subdominant. This progression, a leap from a $\frac{6}{4}$ chord, is strictly forbidden.

5. As a general rule, a pedal tone begins and ends with a chord of which it forms a part. There are a few exceptions, but the student should for the present adhere to the general rule.

6. In music of a pastoral nature, the dominant and tonic pedal are occasionally used simultaneously. This device, known as a "double pedal," is generally used at the interval of a fifth, producing the effect of a "drone" bass, e.g.:

Ex. IV

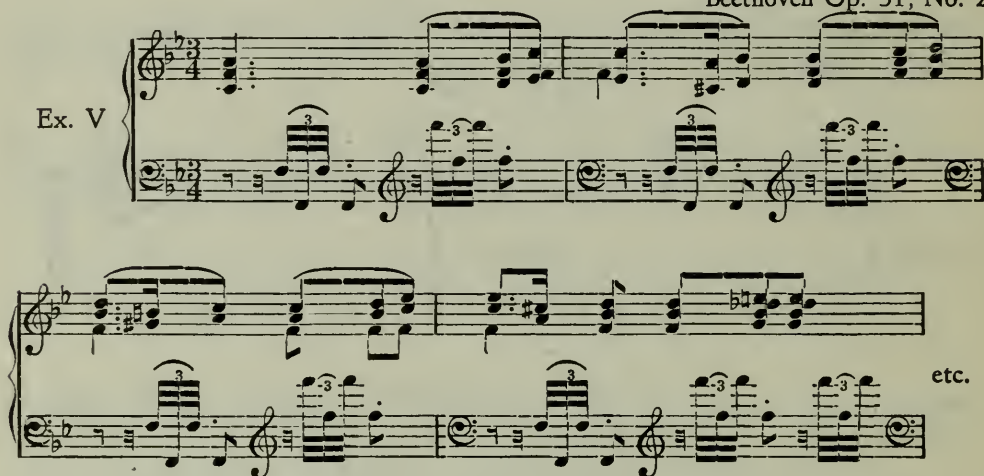
Max Oesten



7. A pedal may be used occasionally as a decorative figure above or below the harmonic progression. The following excerpt from Beethoven is an excellent example:

Beethoven Op. 31, No. 2

Ex. V



8. Having carefully studied this text and conscientiously completed the exercises in the Workbook, the student should be well prepared to analyze the works of the great masters and observe the art of thematic development and form. The ability to recognize that which is good, and the constant practice of the things learned, will lead to advancement in music and the art of composition.

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